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ILLINOIS EDUCATION FOR TECHNOLOGY  
EMPLOYMENT PROJECT  
AT  
LAKE COUNTY AREA VOCATIONAL CENTER

FINAL REPORT  
1985-86

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ILLINOIS DOCUMENTS

Adult,  
Vocational and  
Technical Education



Illinois Education  
for Technology  
Employment Project

Final Report  
1985-86

Illinois  
State Board of  
Education

Walter W. Naumer, Jr.  
Chairman

Ted Sanders  
State Superintendent  
of Education

Department of Adult,  
Vocational and  
Technical Education

Research and  
Development Section

July 1986

Project Staff:

Administrative:

Richard W. Glogovsky  
Project Director

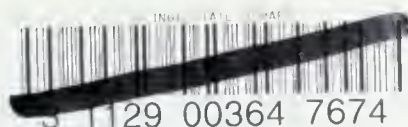
Mary E. Taylor  
Project Secretary

Consultants:

Joanne Fielding  
William Kolton  
Rose Meyer  
Wilfred Pouler  
Janet Robinson  
Raymond Snider

Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

An Equal Opportunity/Affirmative Action Employer







a. **Final Report Abstract Format**

DEFENSE  
I370.13  
FALL 6  
1985/10

**Official Project Title:** New Technology Program Instruction at the Secondary Level  
Lake County Area Vocational Center

**Department of Adult, Vocational and Technical Education Funding Agreement Number:** R-99-36-X-3.4-499

**Project Director:** Richard W. Glogovsky

**Funded Agency:** Lake County Area Vocational Center

**Location of Funded Agency:** 19525 West Washington Street, Grayslake IL 60030

**Time Period Covered:** July 1, 1985 - June 30, 1986

**Major Accomplishments of the Project:**

See attached sheet


**Potential Impact on Vocational Education:**

The new technology program instruction project has identified a variety of activities and products used in the planning, development, articulation and implementation of new technology curriculum and programs at the secondary and post-secondary levels. The project has also become a vehicle which can be used to aid LCAVC and comprehensive high schools in initiating program planning and staff development activities, and selecting appropriate instructional equipment in preparation for advanced technical training at the post secondary level.

Information and methods on integrating math/science programs into the vocational sequence, developing close ties with business/industry, and initiating articulation activities with feeder districts and the community college will also be helpful in promoting the development of a regional vocational delivery system.

**Products Delivered:** (Indicate titles, types, quantity, recipients and date of delivery)

Fifteen copies of the final project report were delivered to the State Board of Education, Department of Adult, Vocational and Technical Education by July 31, 1986. In addition, copies of sample learning guides for the Machine Shop, Secretarial Office Occupations, Computer Assisted Drafting, Medical Assisting and Child Care programs as well as sample program articulation agreements were also delivered to Springfield during FY86.



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<https://archive.org/details/illinoiseducatio00unse>

Major Accomplishments of the Project:

1. The Lake County Area ETE/EFE Advisory Council membership has continued to provide input and recommendations concerning LCAVC involvement in the ETE project. Six meetings of this committee were held during the 1985-86 school year.
2. Project progress meetings were held with LCAVC ETE project consultants Jan Robinson, Rose Meyer, Bill Kolton, Ray Snider and Joanne Fielding on an as-needed basis throughout the school year.
3. New technology CBVE curriculum developed in the areas of Machine Shop, Computer Assisted Drafting, Secretarial Office Occupations, Child Care and Medical Assisting has been field tested during the school year.
4. Six competency-based learning guides have been developed for the Machine Shop (CNC) program (tasks 033, 034, 035, 036, 037, 038), and have also been field tested during the school year. (A sample guide is included in Appendix I.)
5. Five competency-based learning guides have been developed for the Computer Assisted Drafting program (tasks 410, 420, 615, 715, 819), and have also been field tested during the school year. (A sample guide is included in Appendix II.)
6. Twenty-one competency-based learning guides were developed and field tested for the Secretarial Office Occupations program. A sample guide is included in Appendix III.)
7. Four competency-based learning guides have been developed for the Child Care program (tasks 35.01, 35.02, 35.03, 35.04) and have also been field tested during the school year. (A sample guide is included in Appendix IV.)
8. Three competency-based learning guides have been developed for the Medical Assisting program (060A, 060B, 060C), and have also been field tested during the school year. (A sample guide is included in Appendix V.)
9. The following curriculum articulation meetings were held during the 1985-86 school year:

<u>No. of Meetings</u>	<u>Program</u>	<u>Purpose</u>	<u>Educational Agencies</u>
4	Welding	- Development of a program articulation agreement - advanced standing for LCAVC students entering CLC programs	LCAVC, participating district & CLC staff
4	Machine Shop	- Development of a program articulation agreement - advanced standing for LCAVC students entering CLC programs	LCAVC, participating district & CLC staff



<u>No. of Meetings</u>	<u>Program</u>	<u>Purpose</u>	<u>Educational Agencies</u>
3	Air Cond/Refrig/ Heating	- Development of a program articulation agreement - advanced standing for LCAVC students entering CLC programs	LCAVC & CLC staff and administrators
5	Business	- Development of a program articulation agreement - advanced standing for LCAVC students entering CLC programs	LCAVC & CLC staff and administrators
5	Drafting (CAD)	- Program and subject content sequencing and promotion	LCAVC & CLC staff and administrators
1	Food Service	- Joint use of LCAVC facility	LCAVC & CLC staff and administrators
3	Business Data Processing	- Curriculum articulation and utilization of CLC facility/ equipment for LCAVC programs	LCAVC & CLC staff and administrators

10. As a result of the articulation meetings identified above, advanced standing articulation agreements were developed for Welding, Machine Shop, Air Conditioning/Heating/Refrigeration, and Business Ed programs offered at the College of Lake County. (See articulation agreements included in Appendix VI.)
11. The LCAVC Board of Control gave approval for offering a "Principles of Technology" program at the Center during the 1986-87 school year. Unfortunately, low student enrollment forced the course to be dropped for the fall 1986 semester. The program will be reintroduced again during the 1987 spring semester and additional promotional literature will be developed. (See Principles of Technology promotional flyer, Appendix VII.)
12. LCAVC staff have been actively involved in a variety of staff development activities during the 1985-86 school year. (A summary of those activities is included in Appendix VIII.)
13. Two ETE Awareness Workshops were presented to local staff, guidance personnel, administrators and board members during FY86. (See Appendix IX)
14. A cooperative effort between LCAVC and the Lake County Career Guidance Consortium was initiated in order to identify a generic Individualized Career Plan for use in Lake County schools. As a result of this effort, a workshop was offered to participating district guidance personnel and vocational directors on computerizing the ICP. The participants in attendance agreed to continue the effort in identifying an ICP which could be used by all Lake County schools.





b. Expenditure of Funds:

There were no major discrepancies between the Illinois State Board of Education/Department of Adult, Vocational and Technical Education funding agreement amount and actual expenditures claimed for the project.

Salaries	\$ 23,588
Materials and supplies	2,700
Transportation	2,657
Instructional equipment	25,000
Supportive services	15,417
Indirect costs	<u>3,549</u>
Total	\$ 72,911

c. Paid Participants in Activity:

1. Janet Robinson, Secretarial Office Occupations Instructor  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Thirteen years of experience as a vocational teacher and four years of experience in the secretarial work world.

2. William Kolton, Computer Assisted Drafting Instructor  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Eight years of teaching experience, two years of work experience.

3. Wilfred Pouler, Retired Training Director, Outboard Marine Corp.  
24101 - 119th Street  
Trevor WI 53179

Thirty years of work experience, four years of teaching experience. Presently involved in authoring a text on CNC machinery.

4. Richard W. Glogovsky, Assistant Director  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Twenty-five years of vocational education administrative and teaching experience. Twelve years of experience in curriculum development/research. Ten summers of work experience in the following: building trades, golf course maintenance, auto repair, welding, heavy equipment operation, proto-type machinist.

5. Rose Meyer, Medical Assisting Instructor  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Eight years of teaching experience. Four years of work experience in the medical field.





6. Joanne Fielding, Child Care Instructor  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Thirteen years of teaching experience in the area of child care.  
Three years of work experience as a child care (nursery school)  
directress.

7. Dawn Brumm, Commercial Food Service Instructor  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Twenty-three years of teaching experience in the area of commercial  
foods. Ten summers of work experience in commercial food service  
operation.

8. Kathryn Gemple, Special Needs Resource Person  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Twelve years of teaching and special ed coordinator experience.

9. James Seawright, Industrial Electrical Maintenance Instructor  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Ten years of teaching experience in the electronics field. Five  
years of work experience in electronics.

10. Mary Taylor, Administrative Secretary  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Twelve years experience as administrative secretary (three years  
as project assistant). Two years experience as admissions officer  
at Northwestern University.

d. Resource Listing:

(1) Material Resources:

- (a) Assist Students in Improving Their Math Skills, AAVIM  
(b) The One Minute Manager, Blanchard  
(c) BRS/Search User's Manual, BRS  
(d) Jobs of the Future, Schools of the Future, McGraw-Hill



- (e) Terco CNC #4460 Inch Version Manual, Aidex Corp.
- (f) Computer Dictionary, Howard Sams & Co.
- (g) Guide to Free Films, Educators Progress Service
- (h) Modern Machine Shop, Gardner Publications
- (i) The Young Machinist's Handbook, Brown & Sharpe
- (j) Precision Measurement - Student's Text, Brown & Sharpe
- (k) Precision Measurement - Instructor's Guide, Brown & Sharpe

(2) Human Resources:

A complete list of individuals who were not paid, but who contributed to the project, are included as Appendix X.

- (a) Lake County Area Vocational Center Board of Control
- (b) Lake County ETE/EFE Advisory Council
- (c) Lake County Area Vocational Center General Advisory Council
- (d) Advisory committee members from Child Care, Computer Assisted Drafting, Electronic Equipment Repair, Machine Shop, Medical Assisting, Secretarial Office Occupations, and Welding-Fabrication program areas.
- (e) Articulation Directory which includes feeder district, LCAVC and CLC vocational program instructors and coordinators.

(See Appendix X)

e. Major Accomplishments and Significant Findings of the Project:

Objectives and Accomplishments:

- 1. By July 31, 1985, continue to utilize a county ETE/EFE Advisory Council to seek input concerning suggestions for new tech programs and those necessary skills and knowledge required of students completing both secondary and post secondary programs.

Accomplishments: A High Tech Consortium composed of members from business, industry and education was formed and organized during the 1983-84 school year. This committee has continued to be utilized in making suggestions in reference to new technology skills and knowledge required for employability. This committee also reviewed existing program curriculum and made suggestions for identifying new subject content as well as equipment which should be integrated into the curriculum at LCAVC, its feeder districts and the College of Lake County. This council was also utilized to validate local labor market information and make recommendations relative to the formation of a Lake County Area Vocational System for the region.



2. From September 2, 1985, continue to field test newly developed curriculum materials and new technology equipment purchased for use in the Center's Information Processing, Machine Shop, Electronic Equipment Repair, Computer Assisted Drafting and Health Occupations programs.

Accomplishments: Learning guides developed for Information Processing, Machine Shop, Computer Assisted Drafting, Child Care and Medical Assisting were field tested in the appropriate programs during the 1985-86 school year. The necessary modifications were made to the guides as required, and they are available for distribution.

3. From September 2, 1985, hold articulation meetings with participating high school districts and community college staff.

Accomplishments: Articulation meetings were held with a variety of program instructors and administrators from the feeder districts and the College of Lake County. As a result of these articulation meetings, a curriculum articulation agreement between the Center and the College of Lake County was developed and ratified by both boards. Specific articulation agreements (advanced standing) were developed and approved for the Welding, Machine Shop, Air Conditioning/Heating/Refrigeration, and Secretarial Office Occupations (Business Ed) programs. This articulation agreement allows LCAVC program completers to receive college credit for skills acquired at the Vocational Center. The amount of college credit received is contingent upon the number of competencies acquired at the Vocational Center. Tuition charge is waived for the Center students receiving advanced standing credit. (See Appendix VI - Articulation Agreements)

4. By October 21, 1985, identify, bid and order new technology instructional equipment compatible with curriculum being developed in the ETE project.

Accomplishments: New technology equipment for the Computer Assisted Drafting, Medical Assisting and Electronic Equipment Repair program areas was identified by the various program advisory committees. The following equipment purchases were made in order to upgrade curriculum and instructional activities in the programs identified above.

<u>Program</u>	<u>Equipment</u>
Computer Assisted Drafting	4 - IBM XT personal computers
Medical Assisting	4 - Refractometers 4 - Nikon binocular microscopes
Electronic Equipment Repair	1 - VHS video cassette recorder 1 - Beta video cassette recorder

5. From July 1, 1985, coordinate local curriculum and staff development activities with ETE projects conducted at Eastern Illinois University and Northern Illinois University.





Accomplishments: Approximately three-quarters of the LCAVC staff were involved in staff development activities during the 1985-86 school year. The workshops and seminars attended by staff allowed them to upgrade their knowledge and skills in areas of new technology. The selection of LCAVC staff development activities was coordinated with Eastern and Northern Illinois Universities.  
(See Appendix VIII - Summary of FY86 Staff Development Activities)

6. By January 20, 1986, continue and expand on the efforts of working with state and national POT personnel and investigate the possibility of offering a formal pilot test program at the Vocational Center.

Accomplishments: A Principles of Technology program plan, including rationale, course description, and student registration information, has been developed and will be utilized in promoting the program. The POT program was planned to be offered to 10th and 11th grade students during the 1986 fall semester. Unfortunately, due to low student registration, the program was dropped from the 1986 fall course offering list. Another attempt will be made to offer the program to participating high school students during FY87.  
(See Appendix VII - Principles of Technology Brochure)

7. By January 20, 1986, continue efforts in promoting regional approach in developing an Individualized Career Plan Program using the Lake County Career Guidance Consortium and Illinois State University as resources for technical assistance.

Accomplishments: An Individualized Career Plan Workshop for Lake County elementary, high school staff, counselors, vocational directors, administrators and career education teachers was presented on April 29, 1986. The workshop was co-sponsored by LCAVC and the Lake County Career Guidance Consortium. The purpose was to give the participants a better understanding of the ICP process and the possibility of identifying a generic ICP format for regional utilization. The workshop was well received and additional meetings are planned to identify and design an individualized career plan which can be utilized on a regional basis.  
(See Appendix XI - Individualized Career Plan Workshop Flyer)

8. By June 30, 1986, participate in ETE project staff meetings and provide resources necessary to release ETE teachers for conference and project dissemination activities.

Accomplishments: Lake County Area Vocational Center staff identified as ETE consultants actively participated in project staff and curriculum development activities scheduled both at Northern Illinois University and Lake County Area Vocational Center. Substitutes were provided to cover staff involved in conferences and dissemination activities scheduled throughout the 1985-86 school year.

f. Major Dissemination Activities:

It was the intent of the project to disseminate those materials relevant to the various methods used in the planning, development and implementation of high tech vocational education programs which prepare students for employability or entrance into high tech training programs at the community college level.





Before any of the following materials were submitted to DAVTE for distribution, they were examined and approved by the LCAVC, CLC, ETE/EFE Advisory Council and DAVTE technical assistance staff.

A. Products developed and disseminated within the ETE project during the 1985-86 school year included:

- (1) High tech task lists, suggested high tech curriculum with supportive learning guides for the Secretarial Office Occupations Program (Information Processing), Machine Shop Program (Computer Numerical Control), Computer Assisted Drafting (CAD), Industrial Electrical Maintenance Program (Robotics), and Health Occupations Program (Medical Assisting).
- (2) Alternate types of staff inservice workshops in implementing high tech program activities including individualized career plans and integration of math and science into the vocational curriculum.
- (3) A rationale, course description and curriculum outline was developed for the 'Principles of Technology' program.
- (4) A sample curriculum articulation agreement between LCAVC, CLC and participating districts.

Various materials including quarterly reports, labor market information, task lists, curriculum, survey results, innovative ideas and other meaningful materials developed during the 1985-86 school year were shared with the eight other ETE sites and DAVTE Research and Development staff.

B. The target audiences or persons to be affected by the dissemination activity include administrators, vocational-technical instructors and occupational teacher trainers in the schools listed below:

- (1) comprehensive high schools
- (2) area vocational centers
- (c) community colleges
- (d) universities

g. Staff Development Activities:

Staff development activities were conducted on a continuous basis during the 1985-86 school year. Twenty program staff members participated in workshops related to new technological changes in respect to their areas of concentration. A listing of those participants and the specific workshops attended is in Appendix VIII.

The Lake County Area Vocational Center also hosted a VCR Repair Workshop for sixteen regional secondary and post secondary electronics instructors. The workshop ran for five days and was sponsored by the Electronics



Industries Association, Washington D.C. The presentations dealt with diagnosing, servicing and maintaining electronic and mechanical components found in the newest VHS and Beta video cassette recorders. The workshop was very successful in providing hands-on experience in new technology electronics. (See Appendix XII - Electronics Workshop Flyer)

h. Publicity:

A concentrated effort was made to publicize the Center's involvement in the ETE project and the products developed during the past three years.

The LCAVC multi-color program brochure has been revised to include the new program titled 'Principles of Technology.' LCAVC had also commissioned a public relations firm from Nashville, Tennessee to develop a musical public relations announcement for radio use. Needless to report, the taping was a success and the recording is presently being aired on WXLC radio station three times daily during the months of December and January. (See Appendix XIII - LCAVC multi-color brochure)

The LCAVC Centergram newsletter, published in November, highlighted activities in ETE-related programs. This newsletter is sent in part to the following:

- Parents of all LCAVC students
- Feeder district & CLC board of education members
- Literature packets to all feeder district schools & CLC
- Local media (newspapers, radio, TV)
- Legislators
- State Vocational Advisory Council members
- ISBE/DAVTE staff
- All Illinois area vocational center directors
- IVA board members

(See Appendix XIV - Centergram)

In addition, a variety of ETE promotional activities were conducted by LCAVC through planned dissemination workshops conducted at the Center during the 1985-86 school year.

(See Appendix IX - Technology Showcase Presentation Schedule)

i. Statement of Impact:

The new technology curriculum materials developed during the 1985-86 school year are very useful to vocational-technical teachers and administrators in updating their existing vocational programs. This material will help to make vocational programs more relevant with today's new technological manufacturing processes.



j. Conclusions and Recommendations:

Conclusions:

1. Project activities have helped vocational centers and feeder district high schools in program planning, staff development and equipment selection for the integration of new technology into their programs.
2. Project activities have improved communication and articulation between various feeder districts and promoted the regionalization concept of vocational education in Lake County.

Recommendations:

1. Additional effort will need to be placed in addressing the basic skill requirements of vocational students planning to pursue a technical career.
2. Administrative and staff cooperation between LCAVC, participating districts and the College of Lake County will need to continue during the 1986-87 school year. Additional vocational programs will need to be articulated and specific program advanced standing agreements will need to be developed for those not addressed last year. Lake County Area Vocational System program offerings will need to be identified and program curriculum will need to be articulated on a 9th through 12th grade basis.
3. A state-wide effort will need to be made to implement the Principles of Technology into the vocational program sequence throughout the state.
4. A variety of dissemination efforts will need to be made to publicize products developed by the various ETE sites during the past four years.



APPENDICES:

- I. Machine Shop Learning Guide (Sample)
- II. Computer Assisted Drafting Learning Guide (Sample)
- III. Secretarial Office Occupations Learning Guide (Sample)
- IV. Child Care Learning Guide (Sample)
- V. Medical Assisting Learning Guide (Sample)
- VI. Articulation Agreements
- VII. Principles of Technology Brochure
- VIII. Staff Development Activities
- IX. Technology Showcase Presentation Schedule
- X. Non-Paid Project Participants
- XI. Individualized Career Plan Workshop Flyer
- XII. Electronics Workshops Flyer
- XIII. LCAVC Multi-Color Brochure
- XIV. Centergram





## APPENDIX I

### Machine Shop Learning Guide (Sample)



# Illinois State Board of Education

## Department of Adult, Vocational and Technical Education Research and Development Section

### Product Abstract

1. Title of material 6 Machine Shop (CNC) Learning Guides - titles listed on reverse side

2. Date material was completed FY86

3. Please check one: New material ☒ Revised material ☐ Field-tested material ☒

4. Originating agency Lake County Area Vocational Center  
19525 West Washington Street  
Address Grayslake IL Zip Code 60030

5. Name(s) of developer(s) Wilfred Pouler  
Lake County Area Vocational Center  
Address 19525 West Washington Street, Grayslake IL Zip Code 60030

6. Developed pursuant to Contract Number R-99-36-X-3.4-499

7. Subject Matter (Check only one according to Department of Education Code):

Code:

<input type="checkbox"/> 01 Agricultural Education	<input checked="" type="checkbox"/> 10 Industrial Arts Education
<input type="checkbox"/> 03 Business and Office Education	<input type="checkbox"/> 16 Technical Education
<input type="checkbox"/> 04 Distributive Education	<input type="checkbox"/> 17 Trade and Industrial Education
<input type="checkbox"/> 07 Health Occupations Education	<input checked="" type="checkbox"/> 22 Cooperative Education
<input type="checkbox"/> 09 Home Economics Education	<input type="checkbox"/> Career Education
	<input type="checkbox"/> Other (Specify) _____

8. Education Level:

<input checked="" type="checkbox"/> Pre-K Thru 6	<input type="checkbox"/> 7-8	<input type="checkbox"/> 9-10	<input checked="" type="checkbox"/> 11-12
<input checked="" type="checkbox"/> Post-Secondary	<input checked="" type="checkbox"/> Adult	<input type="checkbox"/> Teacher (Pre-service)	
<input type="checkbox"/> Administrator (Pre-Service)		<input type="checkbox"/> Other (Specify) _____	

9. Intended for Use By:

<input checked="" type="checkbox"/> Student	<input checked="" type="checkbox"/> Classroom Teacher	<input checked="" type="checkbox"/> Local Administrator
<input type="checkbox"/> Teacher Educator	<input type="checkbox"/> Guidance Staff	<input type="checkbox"/> State Personnel
<input type="checkbox"/> Other (Specify) _____		

10. Student Type:

<input checked="" type="checkbox"/> Regular	<input type="checkbox"/> Disadvantaged	<input type="checkbox"/> Handicapped
<input type="checkbox"/> Limited-English Proficiency	<input type="checkbox"/> Other (Specify) _____	

11. Medium and Format of Materials:

<input checked="" type="checkbox"/> HARDCOPY	<input type="checkbox"/> VIDEOTAPE	<input type="checkbox"/> FILM	<input type="checkbox"/> MICROFICHE
No. of pages <u>various</u>	<input type="checkbox"/> Minutes	<input type="checkbox"/> Minutes	<input type="checkbox"/> B & W
<input type="checkbox"/> Paper bound	<input type="checkbox"/> B & W	<input type="checkbox"/> B & W	<input type="checkbox"/> Color
<input type="checkbox"/> Hard bound	<input type="checkbox"/> Color	<input type="checkbox"/> Color	
<input checked="" type="checkbox"/> Loose-leaf	<input type="checkbox"/> inches	<input type="checkbox"/> mm	
Photos: Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Diagrams: Yes <input type="checkbox"/>	No <input type="checkbox"/>		

☐ SLIDES ☐ FILM STRIPS ☐ AUDIO ☐ OTHER

No. of frames \_\_\_\_\_

☐ B & W

☐ Color

☐ Audio

☐ Carousel provided

☐ Other packaging used

(Specify) \_\_\_\_\_

No. of frames \_\_\_\_\_

☐ B & W

☐ Color

☐ Audio

☐ Automatic synch

☐ \_\_\_\_\_ Hz

☐ Manual cue

☐ Reel

☐ Cassette

☐ Cartridge

Specify: \_\_\_\_\_

12. Availability:

☐ One copy free

For sale @ \$ \_\_\_\_\_ per copy

☐ Not available

☒ In ERIC system (No. \_\_\_\_\_)

☐ Loan copy available

Contact: Name Illinois Vocational Curriculum Center

Phone ( ) \_\_\_\_\_

Sangamon State University, F2

Address Springfield IL 62708

Zip Code \_\_\_\_\_

13. Copyright Restrictions:

Contact: Name None

Phone ( ) \_\_\_\_\_

Address \_\_\_\_\_ Zip Code \_\_\_\_\_

14. What level(s) of assistance is required to provide implementation of this outcome?

☐ awareness

☒ XX

understanding

☐ deciding

☒ XX

implementing

15. Are Consultative/Inservice (or staff development) available? Yes ☒ No ☐  
For FY87 only

Contact: Illinois State Board of Education  
Department of Adult, Vocational and Technical Education  
Research and Development Section, E-426  
100 North First Street  
Springfield, IL 62777  
(217) 782-4620

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how it is organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or on another sheet, if necessary.)

Competency-based learning guides on CNC programming a Terco mill

17. Person Completing this Abstract: Richard W. Glogovsky

Full Address:

Lake County Area Vocational Center

19525 West Washington Street

Grayslake IL 60030

Zip \_\_\_\_\_

LEARNING GUIDE TITLES:

- Task 033 - Develop and run a CNC program for drilling and tapping using a vertical mill
- \* Task 034 - Develop a CNC program for milling a straight slot and perform the programmed machining operation
- Task 035 - Develop and run CNC programs for milling angular slots (linear interpolation)
- Task 036 - Develop a CNC program for milling circular slots (circular interpolation)
- Task 037 - Develop a CNC program for milling a circular slot
- Task 038 - Develop a CNC program for milling holes which have diameters greater than the end mill cutter



LAKE  
COUNTY  
AREA  
VOCATIONAL  
CENTER

# COMPETENCY-BASED INDIVIDUALIZED VOCATIONAL EDUCATION INSTRUCTION

## STUDENT LEARNING GUIDE

Produced By W. Pouler

Date 2/86

### TASK:

DEVELOP A CNC PROGRAM FOR MILLING A STRAIGHT SLOT  
AND PERFORM THE PROGRAMMED MACHINING OPERATION

### PURPOSE:

This guide will help you apply the skills learned  
in Task 033 "DEVELOP AND RUN A CNC PROGRAM FOR  
DRILLING AND TAPPING USING A VERTICAL MILL."  
This task will also reinforce the previously learned  
CNC vertical milling machine operational control  
skills.

#### MACHINE SHOP

Program	Task	Est.Time	Prereq.
45.0503	034	2 hours	033



# LEARNING CONTRACT (optional)

## 1. STUDENT DATA

NAME \_\_\_\_\_

SOCIAL SECURITY NUMBER \_\_\_\_\_

LENGTH OF CONTRACT (NORMAL TIME IN HOURS) \_\_\_\_\_

## 2. TERMINAL PERFORMANCE OBJECTIVE

Given: Milling speeds and feeds tables, Terco milling machine, tools and materials.

You will: Develop and run a CNC program for milling a straight slot.

How well: To master this task you must score 80 out of 100 or score 80% on the performance checklist.

### 2a. INTERMEDIATE OBJECTIVE(s)

1. Develop the CNC mill process steps.
2. Develop a CNC program for this operation.
3. Dry run program.
4. Perform the CNC mill programmed machining operations.

## 3. AGREEMENT

I, \_\_\_\_\_ agree to complete the above stated terminal performance requirement within \_\_\_\_\_ to \_\_\_\_\_. I further recognize that the conditions of the contract (performance and time agreement) report my ability to perform the requirements of the occupation and record my progress.

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Instructor's Signature  
(verifies competency)

Program	Task	Page
48.0503	034	2

# INTERMEDIATE OBJECTIVE

1. Develop the CNC mill process steps.

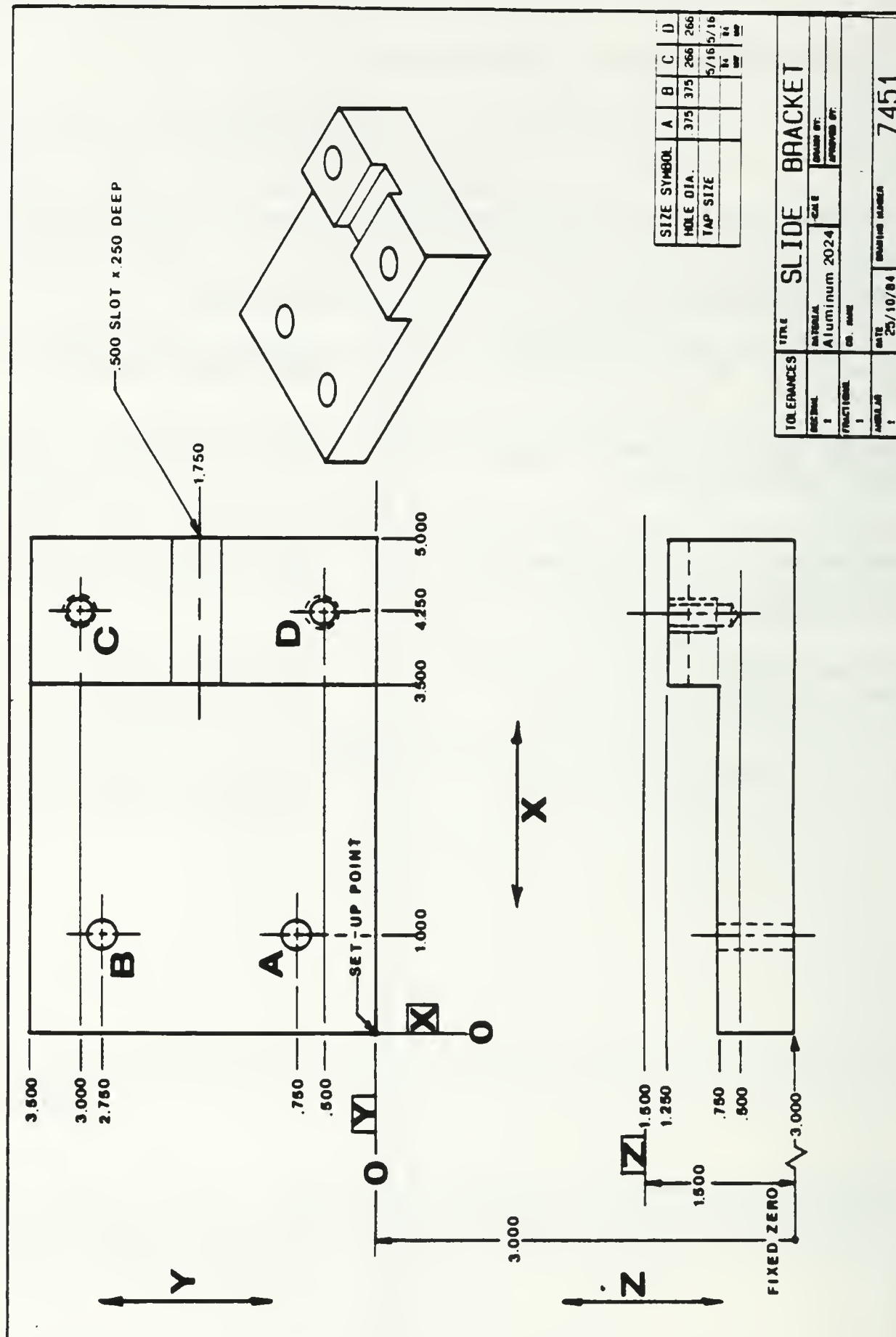
## LEARNING STEPS (Activities)

1. Analyze the part print listed in resource #1 to gather data on the mill slot.
2. Determine tooling needed for this project (5/16" end mill).
3. Referring to information sheets #2 & 3, determine machining speeds and feeds. List values on CNC program sheet. Use low values on the tables.
4. Determine process steps and list in operation column of CNC program sheet.
5. Go to next intermediate objective.

## RESOURCES

1. Information sheet #1, page 4 in this learning guide.
2. Same as resource #1 above.
3. Information sheets #2 & 3, pages 5 & 6 in this learning guide.
4. Information sheet #4, page 7 in this learning guide.
5. Intermediate objective #2, page 8 in this learning guide.

Program	Task	Page
48.0503	034	3



SIZE SYMBOL	A	B	C	D
HOLE DIA.	375	375	266	266
TAP SIZE			5/16	5/16

TOLERANCES		TITLE		SLIDE BRACKET	
REC TOOL	1	AN TOOLS	CALL	QUANT. BY	
		Aluminum 2024		APPROVED BY:	
FACT TOOL	1	CD. NAME			
ANALYSIS	1	DATE	QUANTIFIED NAME	7451	
		25/10/84			

Program	Task	Page
48.0503	034	4



# INFORMATION SHEET #2

Suggested Cutting Rates Using High Speed Steel Cutting Tools					
Material	Drilling sfm	Reaming sfm	Turning sfm	Tapping sfm *	Milling sfm
Aluminum	250-600	100-300	400-1000	90	300-800
Brass					
free cutting	150-300	130-200	225-350	100	150-300
Bronze, soft	100-250	75-180	150-225	75	100-250
Cast iron					
Soft	75-150	60-100	100-150	40	75-150
Medium	70-100	30-65	75-120	30	70-100
Hard	60-100	20-55	50-90	20	50-80
Copper	60-100	40-60	100-200	40	80-140
Steel					
Free machining	100-145	60-100	125-200	40	100-180
Under 0.3 carbon	70-120	50-90	75-175	35	70-120
0.3 to 0.6 carbon	55-90	45-70	65-120	25	55-90
Over 0.6 carbon	40-60	40-50	60-80	20	40-60
Magnesium	300-650	150-350	600-1200	150	300-600
Titanium	30-60	10-20	25-55	30	25-50

\* Suggested rates - machining variables may require changing rates

## END MILL SPEED RATES

Cutting rate can be converted to spindle speed by using the formula:

(Basic formula)

$$\text{rpm} = \frac{\text{sfm} \times 12}{\pi \times \text{diameter of cutter}}$$

(Simplified formula)

$$\text{rpm} = \frac{C \times \text{sfm}}{\text{diameter of cutter}}$$

Constant "C" = 4

Example

5/16 end mill in SAE 1030 steel

$$\text{rpm} = \frac{4 \times 70}{.3125}$$

$$\text{rpm} = 896$$

Rounded off speed = 900

# INFORMATION SHEET #3

## END MILL FEED RATES

Suggested Cutting Rates Using High Speed Steel Tools		
	1/4 - 1/2 inch diameter end mill	1/2 - 1 inch diameter end mill
Material	IPT	IPT
Aluminum	.003 to .006	.006 to .009
Brass, free cutting	.003 to .005	.005 to .008
Bronze, soft	.002 to .004	.002 to .007
Cast iron		
Soft	.003 to .005	.005 to .008
Medium	.0025 to .005	.005 to .007
Hard	.002 to .0035	.0035 to .005
Copper	.002 to .004	.004 to .006
Magnesium	.003 to .006	.006 to .010
Steel		
Free machining	.002 to .004	.004 to .006
Under 0.3 carbon	.001 to .0025	.0025 to .004
0.3 to 0.6 carbon	.0005 to .002	.002 to .003
over 0.6 carbon	.0003 to .001	.001 to .002
Titanium	.001 to .0025	.0025 to .004

End mill cutting feed rate can be found by using the formula:

$$\text{IPM} = \text{IPT} \times \text{number of teeth} \times \text{RPM}$$

IPM = inches per minute

IPT = inches per tooth

RPM = rotation per minute

### Example

5/16 - 4 tooth end mill in SAE  
1030 steel. (RPM = 896)

$$\text{IPM} = .001 \times 4 \times 896$$

$$\text{IPM} = 3.58$$

Rounded off feed = 3.50 inches

## TOOLING



# INTERMEDIATE OBJECTIVE

2. Develop a CNC program for this operation.

## LEARNING STEPS (Activities)

1. Complete tooling and heading sections of CNC program form as listed in resource #1.
2. List block data for entire CNC mill program on program sheet.  
Fixed zero - X = 000  
                  Y = 000  
                  Z = 1.500
3. Proofread CNC program and submit to instructor for his review.
4. Go to next intermediate objective.

## RESOURCES

1. Standard CNC form (same as information sheet #4, page 7 in this learning guide).
2. Same as resource #1 above.
3. Instructor's CNC program solution sheet, page 13 in this learning guide.
4. Intermediate objective #3, page 9 in this learning guide.

Program	Task	Page
48.0503	034	8

# INTERMEDIATE OBJECTIVE

3. Dry run program.

## LEARNING STEPS (Activities)

1. Review milling machine controls.
2. Enter CNC mill program into control unit.
3. Using programming information learned in resource #2, dry run program.
4. Go to next intermediate objective.

## RESOURCES

1. Video tapes on Terco programmer controls.
2. Terco control unit CNC 4000 and pages 9 through 16 of learning guide Task 033, or Terco mill training manual, pages 7 through 11.
3. Terco programming control station CNC 4000.
4. Intermediate objective #4, page 10 in this learning guide.

Program	Task	Page
48.0503	034	9

# INTERMEDIATE OBJECTIVE

4. Perform the CNC mill programmed machining operations.

## LEARNING STEPS (Activities)

1. Using skills learned in Task 033, mount part on Terco milling machine table and set tool to XYZ zero start point.
2. Mill slot as indicated on part print using appropriate programming commands identified in resource #2.
3. Remove part from fixture and submit to instructor for grading. See resource #3.

## RESOURCES

2. Information sheets #13 through #17, pages 18 through 21 and 23-24 from learning guide Task 033, or Terco mill training manual, page 12.
2. Information sheets #5 through #10, pages 9 through 14 from learning guide Task 033, or Terco mill training manual, pages 7-11.
3. Performance/product checklist, page 11, and score sheet, page 12, in this learning guide.

Program	Task	Page
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## PERFORMANCE/PRODUCT CHECKLIST

Program: Machine Shop

Task No: 034

Student's Name: \_\_\_\_\_ Date Of Attempt: \_\_\_\_\_

Evaluator's Name: \_\_\_\_\_ Evaluation Site: \_\_\_\_\_

Performance Attempt: 1 2 3 4

### Terminal Performance Objective:

Write a CNC program and mill a straight slot.

### Directions To The Student:

Before attempting this task for mastery, carefully review this checklist. You will be evaluated on the basis of this checklist. When you feel you are ready for evaluation, contact your instructor. You must complete your performance within 30 minutes and must score at least 80 out of \* 100 points or 80 % for mastery. Critical items are marked with an asterisk (\*). These items must be satisfactorily completed.

\* 5 points per answer

### Directions To The Evaluator:

The student will contact you when ready for the evaluation. The student must complete the performance within \_\_\_\_\_ minutes and must score \_\_\_\_\_ out of \_\_\_\_\_ points or \_\_\_\_\_ % and all items marked with an asterisk (\*) must be satisfactorily completed.

Program	Task	Page
48.0503	034	11

CRITICAL ITEMS	ITEMS TO BE OBSERVED OR CHECKED	RATING	
		YES	NO
	Speed - 1000		
	Feed - 4.0		
	Start		
	Clamp part		
	Set tool		
N 001	Rapid to 1st cut		
N 002	Rapid to depth		
N 003	Mill 1st cut		
N 004	Retract tool		
N 005	Rapid to 2nd cut		
N 006	Rapid to depth		
N 007	Mill 2nd cut		
N 008	Retract tool		
N 009	Rapid to zero		
N 010	Stop		
	Unclamp part		
	Slot width		
	Slot depth		
	Slot location		
	Surface finish		
		TOTAL POINTS EARNED -	
		POINTS NEEDED FOR MASTERY -	
		TOTAL POINTS POSSIBLE -	
		<u>5 points per listed item</u>	

## Solution Sheet

[illegible]



## APPENDIX II

### Computer Assisted Drafting Learning Guide (Sample)





# Illinois State Board of Education

## Department of Adult, Vocational and Technical Education Research and Development Section

### Product Abstract

1. Title of material 5 Computer Assisted Drafting Learning Guides - titles listed on reverse side

2. Date material was completed FY86

3. Please check one: New material ☒ Revised material ☐ Field-tested material ☒

4. Originating agency Lake County Area Vocational Center  
19525 West Washington Street  
Address Grayslake IL 60030 Zip Code         

5. Name(s) of developer(s) William Kolton  
Lake County Area Vocational Center  
Address 19525 West Washington Street, Grayslake IL Zip Code 60030

6. Developed pursuant to Contract Number R-99-36-X-3.4-499

7. Subject Matter (Check only one according to Department of Education Code):  
Code

<input type="checkbox"/> 01 Agricultural Education	<input checked="" type="checkbox"/> 10 Industrial Arts Education
<input type="checkbox"/> 03 Business and Office Education	<input type="checkbox"/> 16 Technical Education
<input type="checkbox"/> 04 Distributive Education	<input checked="" type="checkbox"/> 17 Trade and Industrial Education
<input type="checkbox"/> 07 Health Occupations Education	<input type="checkbox"/> 22 Cooperative Education
<input type="checkbox"/> 09 Home Economics Education	<input type="checkbox"/> Career Education
	<input type="checkbox"/> Other (Specify) <u>        </u>

8. Education Level:

<input checked="" type="checkbox"/> Pre-K Thru 6	<input type="checkbox"/> 7-8	<input type="checkbox"/> 9-10	<input checked="" type="checkbox"/> 11-12
<input checked="" type="checkbox"/> Post-Secondary	<input checked="" type="checkbox"/> Adult	<input type="checkbox"/> Teacher (Pre-service)	
<input type="checkbox"/> Administrator (Pre-Service)		<input type="checkbox"/> Other (Specify) <u>        </u>	

9. Intended for Use By:

<input checked="" type="checkbox"/> Student	<input checked="" type="checkbox"/> Classroom Teacher	<input checked="" type="checkbox"/> Local Administrator
<input type="checkbox"/> Teacher Educator	<input type="checkbox"/> Guidance Staff	<input type="checkbox"/> State Personnel
<input type="checkbox"/> Other (Specify) <u>        </u>		

10. Student Type:

<input checked="" type="checkbox"/> Regular	<input type="checkbox"/> Disadvantaged	<input type="checkbox"/> Handicapped
<input type="checkbox"/> Limited-English Proficiency	<input type="checkbox"/> Other (Specify) <u>        </u>	

11. Medium and Format of Materials:

<input checked="" type="checkbox"/> HARDCOPY	<input type="checkbox"/> VIDEOTAPE	<input type="checkbox"/> FILM	<input type="checkbox"/> MICROFICHE
No. of pages <u>various</u>	<input type="checkbox"/> Minutes	<input type="checkbox"/> Minutes	<input type="checkbox"/> B & W
<input type="checkbox"/> Paper bound	<input type="checkbox"/> B & W	<input type="checkbox"/> B & W	<input type="checkbox"/> Color
<input type="checkbox"/> Hard bound	<input type="checkbox"/> Color	<input type="checkbox"/> Color	
<input checked="" type="checkbox"/> Loose-leaf	<input type="checkbox"/> inches	<input type="checkbox"/> mm	
Photos: Yes <input type="checkbox"/> No <input type="checkbox"/>			
Diagrams: Yes <input type="checkbox"/> No <input type="checkbox"/>			



☐ SLIDES

☐ FILM STRIPS

☐ AUDIO

☐ OTHER

No. of frames \_\_\_\_\_

☐ 8 1/2 W

☐ Color

☐ Audio

☐ Carousel provided

☐ Other packaging used

(Specify) \_\_\_\_\_

No. of frames \_\_\_\_\_

☐ 8 1/2 W

☐ Color

☐ Audio

☐ Automatic synch

\_\_\_\_\_ Hz

☐ Manual cue

☐ Reel

☐ Cassette

☐ Cartridge

Specify: \_\_\_\_\_

12. Availability:

☐ One copy free

☒ In ERIC system (No. \_\_\_\_\_)

For sale @ \$ \_\_\_\_\_ per copy

☐ Not available

☐ Loan copy available

Contact:

Name

Illinois Vocational Curriculum Center  
Sangamon State University, F2

Phone ( ) \_\_\_\_\_

Address Springfield IL 62708

Zip Code \_\_\_\_\_

13. Copyright Restrictions:

Contact:

Name

None

Phone ( ) \_\_\_\_\_

Address \_\_\_\_\_

Zip Code \_\_\_\_\_

14. What level(s) of assistance is required to provide implementation of this outcome?

☐ awareness

☒

understanding

☐ deciding

☒

implementing

15. Are Consultive/Inservice (or staff development) available? Yes ☒ No ☐  
For FY87 only

Contact:

Illinois State Board of Education  
Department of Adult, Vocational and Technical Education  
Research and Development Section, E-428  
100 North First Street  
Springfield, IL 62777  
(217) 782-4620

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or another sheet, if necessary.)

Competency-based learning guides on CAD hardware and software

17. Person Completing this Abstract:

Richard W. Glogovsky

Full Address:

Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

LEARNING GUIDE TITLES:

Task 410 - Constructing and identifying the alphabet of lines

\* Task 420 - Using orthographic projection (multiview drawings) to define a basic mechanical drafting problem

Task 615 - Operating plotters at Lake County Area Vocational Center

Task 715 - Using the output option in the main selection menu in micro-minndraft

Task 819 - Develop drawings using lines, circles, and arcs

\* Sample



LAKE  
COUNTY  
AREA  
VOCATIONAL  
CENTER

# COMPETENCY-BASED INDIVIDUALIZED VOCATIONAL EDUCATION INSTRUCTION

## STUDENT LEARNING GUIDE

Produced By WILLIAM A. KOLTON

Date 3/86

**TASK:** USING ORTHOGRAPHIC PROJECTION (MULTIVIEW DRAWINGS) TO DEFINE A BASIC MECHANICAL DRAFTING PROBLEMS.

### PURPOSE:

People do not only communicate by verbal and written language, but also by a graphic (pictorial) language. One of these graphic means is a technical drawing. A technical drawing, properly made, will give a more accurate and clearer description of an object than a photograph or written explanation. Technical drawings are made according to some standards and principles which will result in views or Orthographic Projection. In this guide you will learn some of the standards and principles of Orthographic Projection that drafts persons, engineers, and architects use every day.

#### COMPUTER ASSISTED DRAFTING

edk

Program	Task	Est.Time	Prereq.
48.0101	420	6 hours	NONE

# LEARNING CONTRACT (optional)

## 1. STUDENT DATA

NAME \_\_\_\_\_

SOCIAL SECURITY NUMBER \_\_\_\_\_

LENGTH OF CONTRACT (NORMAL TIME IN HOURS) \_\_\_\_\_

## 2. TERMINAL PERFORMANCE OBJECTIVE

Given the information contained in this guide, you will be able to identify and construct the three basic views used in Orthographic Projection and score 80%, 12 out of 15 on the criterion exam.

### 2a. INTERMEDIATE OBJECTIVE(s)

1. Using Orthographic Projection (Multiview Drawings) to define a basic mechanical drafting problem.

## 3. AGREEMENT

I, \_\_\_\_\_ agree to complete the above stated terminal performance requirement within \_\_\_\_\_ to \_\_\_\_\_. I further recognize that the conditions of the contract (performance and time agreement) report my ability to perform the requirements of the occupation and record my progress.

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Instructor's Signature  
(verifies competency)

Program	Task	Page
48.0101	420	2



# INTERMEDIATE OBJECTIVE #1

Using Orthographic Projection (Multiview drawings) to define a basic mechanical drafting problem.

## LEARNING STEPS (Activities)

1. Read Resource #1 to learn about Orthographic Projection (Multiview Drawing).
2. Complete Evaluation Sheet #1 to determine your understanding of Orthographic Projection.
3. Complete Evaluation Sheets #2, 3, 4 on Surface Identification to reinforce prior learning in Resource #3.
4. Complete Evaluation Sheets 5 & 6 on View Identification to see if you are getting a handle on this unit. See Resource #4.
5. Now you will be actually drawing, complete Evaluation sheets identified in Resource #5.
6. To complete this learning guide take the Criterion Exam and score 80% or better.

## RESOURCES

1. Text: Basic Technical Drawing by Spencer/Dygdon, Chapter 6 pages 83 - 90.
2. Evaluation Sheet #1 page 4, in this learning guide. When you finish, have this sheet checked by your instructor.
3. Evaluation Sheets #2 - 4, pages 5 - 7 in this learning guide. When you have finished these sheets have them checked by your instructor before continuing.
4. Evaluation Sheets 5 & 6, pages 8 - 9, in this learning guide. When you have finished these sheets, have them checked by your instructor before continuing.
5. Evaluation Sheets 7 - 9, page 10 - 12, in this learning guide. When you have finished these sheets, have them checked by your instructor before continuing.
6. Criterion Exam. See instructor.

Program	Task	Page
48.0101	420	3

Define the following terms as they apply to drafting:

Height:

Width:

Depth:

Frontal Plane of Projection:

Projectors:

Line of sight:

#### Questions

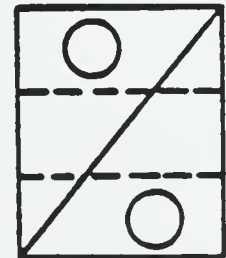
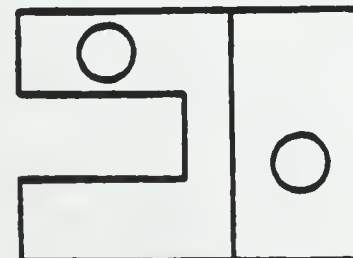
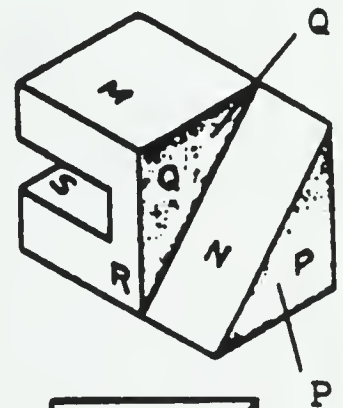
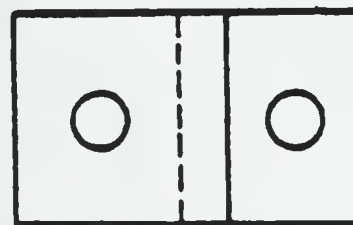
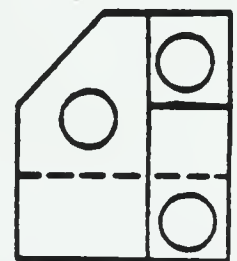
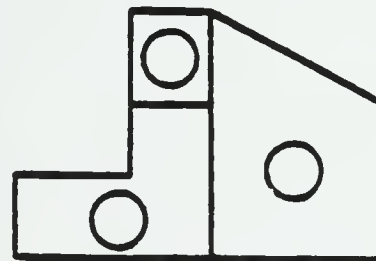
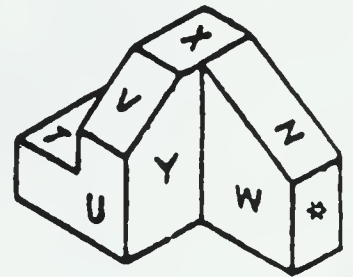
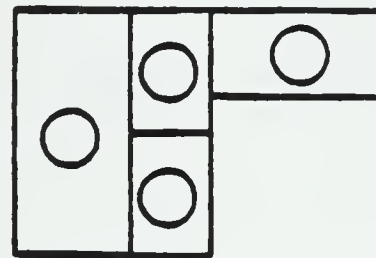
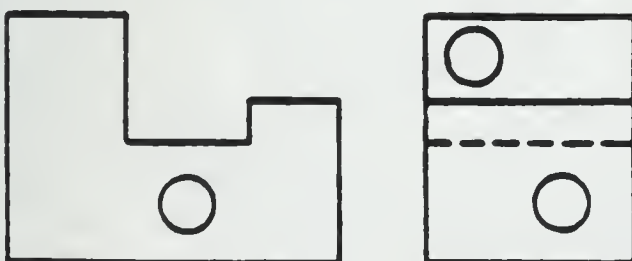
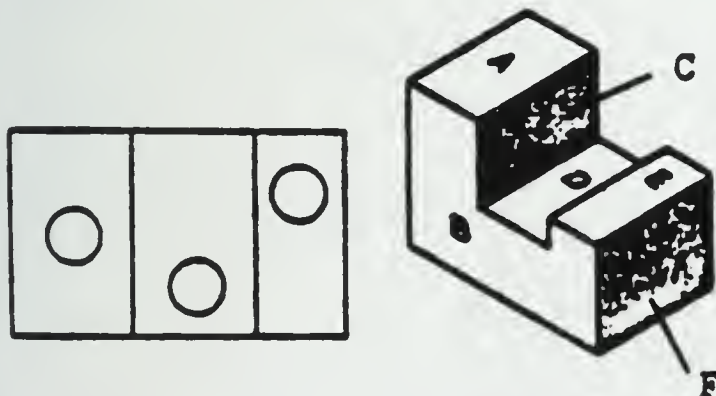
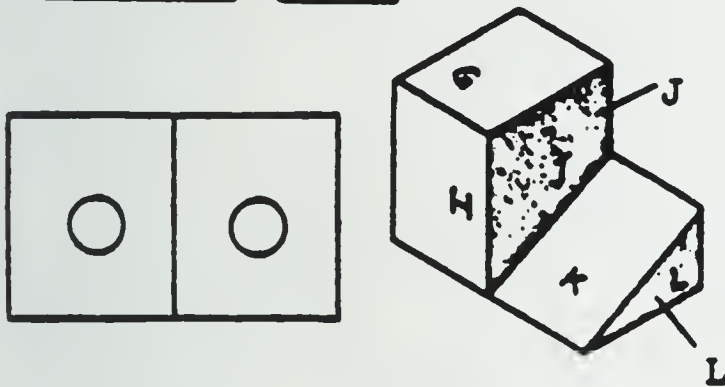
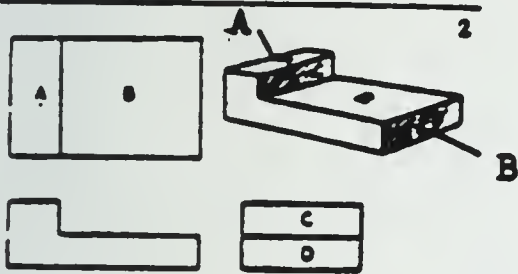
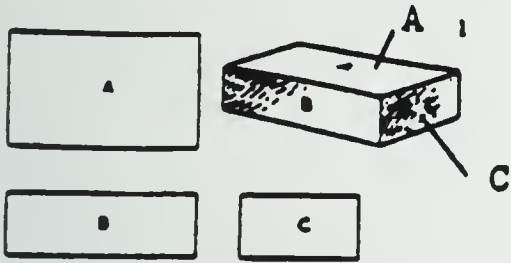
1. List the six views of an object. \_\_\_\_\_, \_\_\_\_\_  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
2. Of the three dimensions of an object, which two dimensions are shown in the:
  - A. Front View \_\_\_\_\_
  - B. Top View \_\_\_\_\_
  - C. Right Side View \_\_\_\_\_
3. What is the angle between the front view and the top view? \_\_\_\_\_
4. What is the angle between the front view and the right view? \_\_\_\_\_
5. What is the angle between the top view and the right side view? \_\_\_\_\_
6. What is the angle between the a projector and a principle plane? \_\_\_\_\_
7. What are two ways in which the front view of an object is selected?
  - 1.
  - 2.

# EVALUATION SHEET #2

## SURFACE IDENTIFICATION

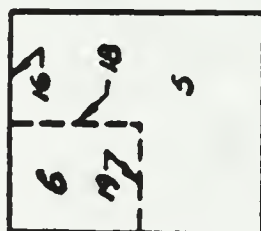
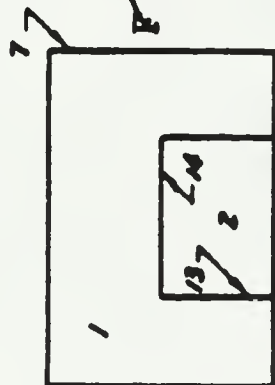
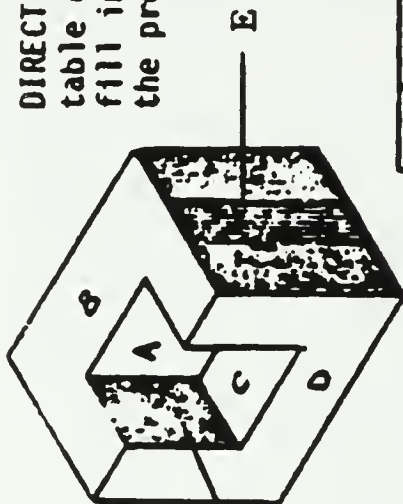
### DIRECTIONS:

Study the sample problem on the left. Place the appropriate letter from the pictorial, in the circles on the orthographic views below.

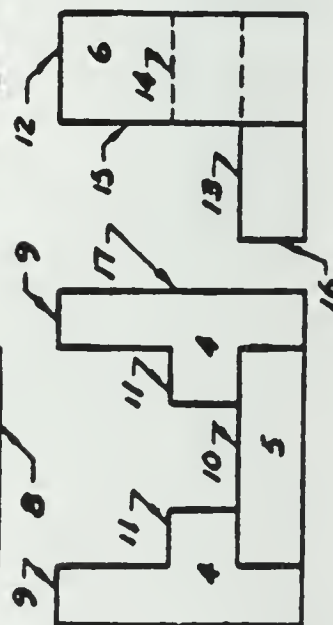
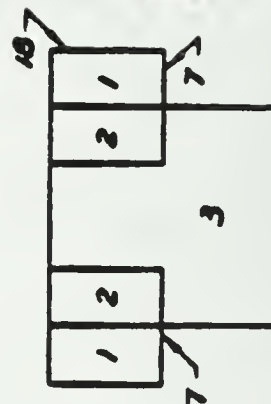
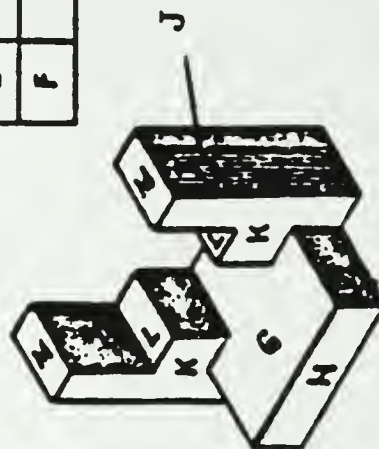
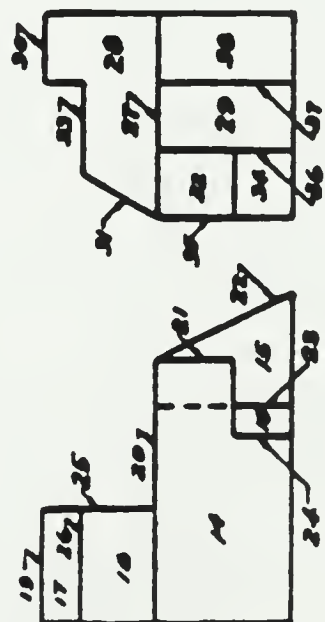
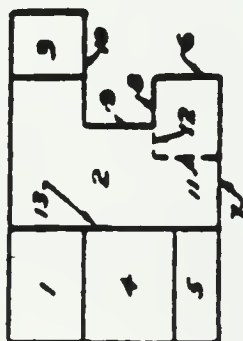
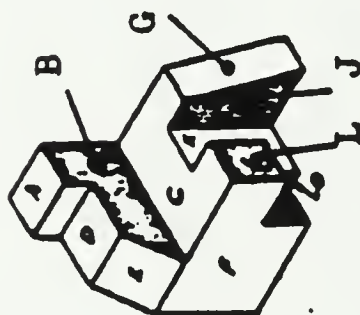


# EVALUATION SHEET #3 SURFACE IDENTIFICATION

DIRECTIONS: Complete the table on the left. Then fill in tables 1 and 2 with the proper numbers.



	TOP	FRONT	R.SIDE
A			
B			
C			
D			
E			
F			



	TOP	FRONT	R.SIDE
G			
H			
I			
J			
K			
L			
M			

	TOP	FRONT	R.SIDE
A	1	19	30
B	13	25	28
C	2	20	27
D	4	26	33
E	5	16	31
F	7	14	35
G	3	22	38
H	10	15	37
I			
J			
K			
L			
M			
O			

Program

48.0101

Task

420

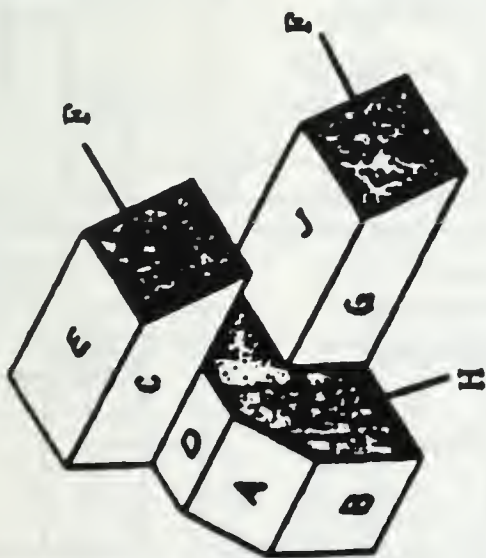
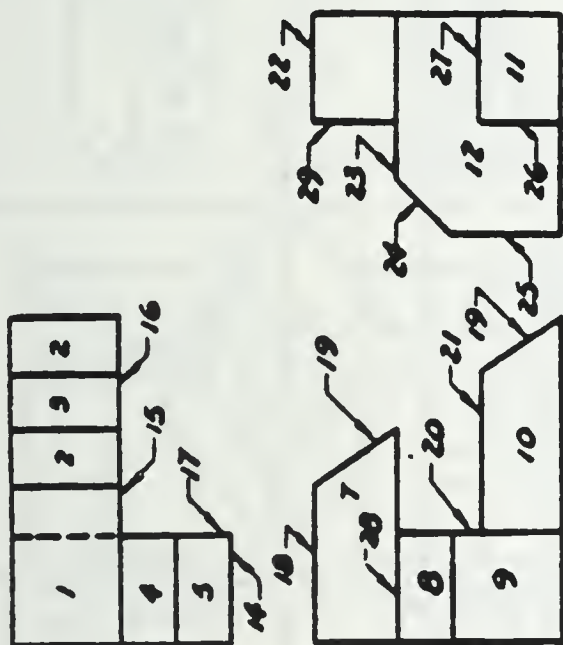
Page

6



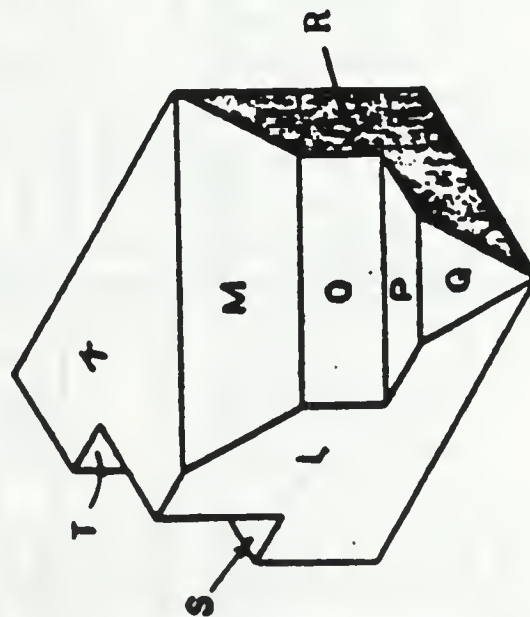
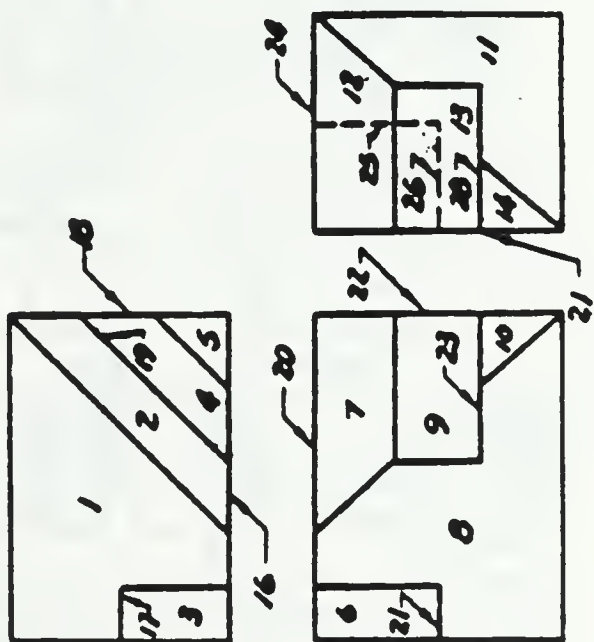
# EVALUATION SHEET #4 SURFACE IDENTIFICATION

PT.	TOP	FRONT	R.SIDE
A			
B			
C			
D			
E			
F			
G			
H			
J			



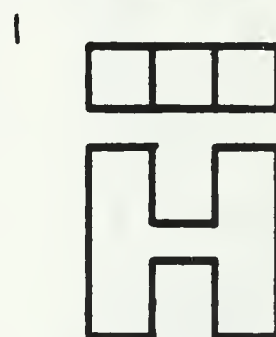
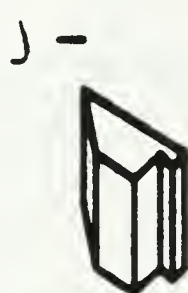
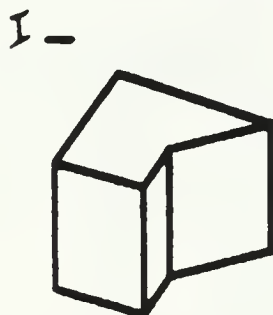
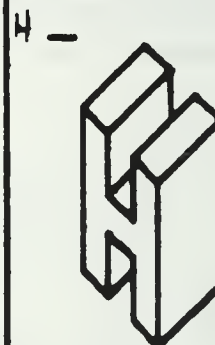
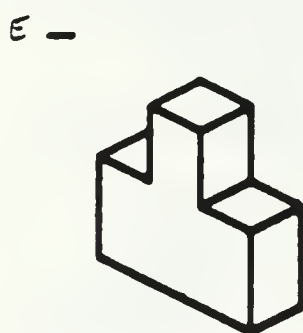
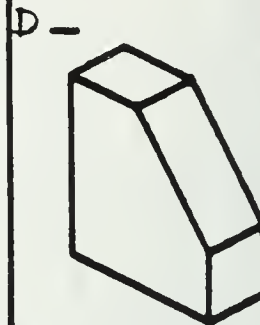
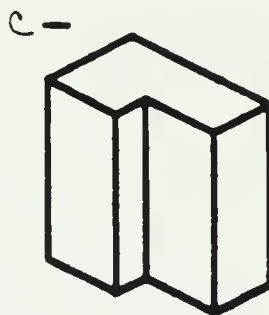
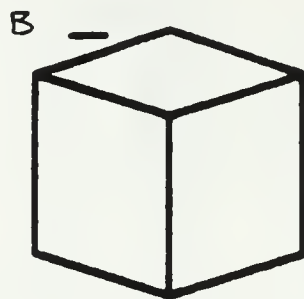
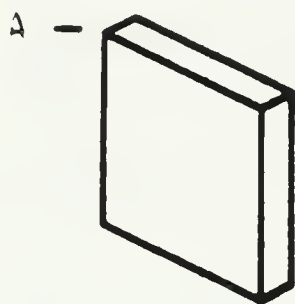
DIRECTIONS: Fill in the table with the appropriate letter from the pictorial drawing.

PT.	TOP	FRONT	R.SIDE
K			
L			
M			
O			
P			
Q			
R			
S			
T			


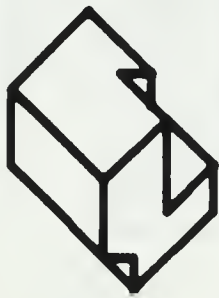
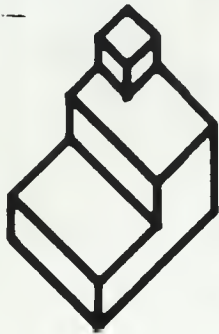
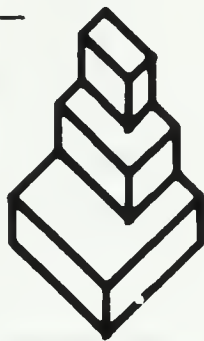

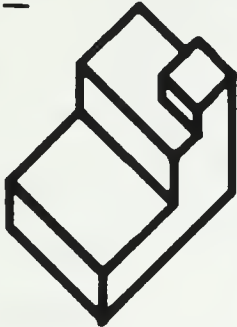
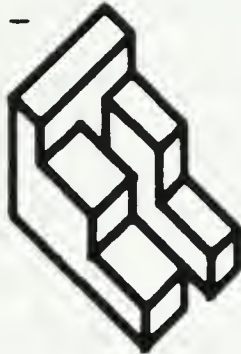
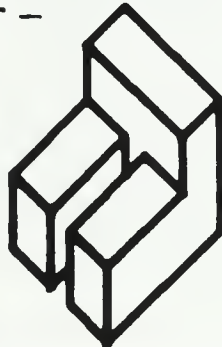
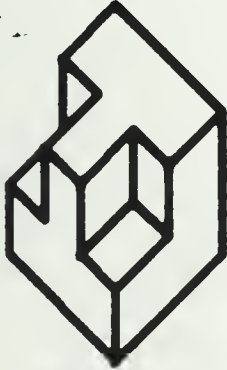
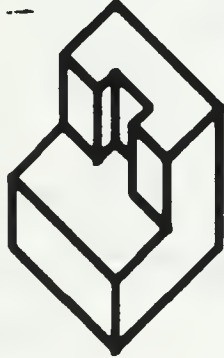










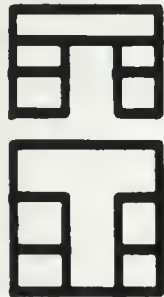


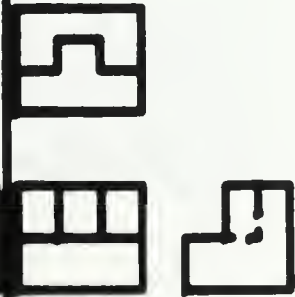


# EVALUATION SHEET #5 VIEW IDENTIFICATION

Directions: Given are the pictorial drawings and the way they look on an Orthographic Drawing. Match the number of the Orthographic drawing with the letter of the pictorial.



# EVALUATION SHEET #6 VIEW IDENTIFICATION

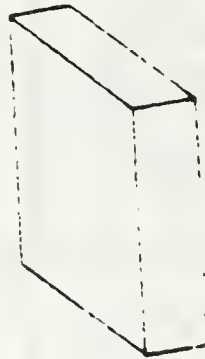
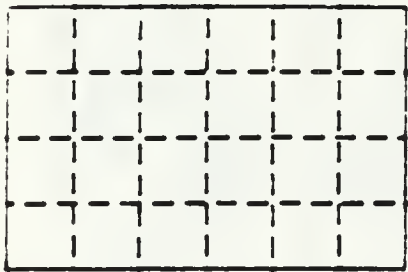
2 - 	3 - 	4 - 	5 - 
6 - 	7 - 	8 - 	9 - 
10 - 	11 - 	12 - 	13 - 
14 - 	15 - 	16 - 	17 - 
18 - 	19 - 	20 - 	21 - 
22 - 	23 - 	24 - 	25 - 



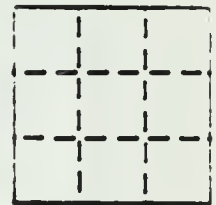
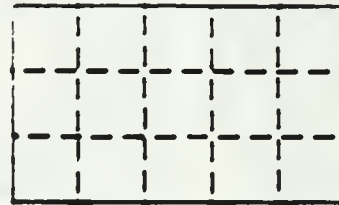
# EVALUATION SHEET #7

DRAW THE THIRD VIEW

1

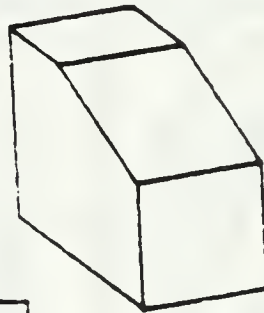
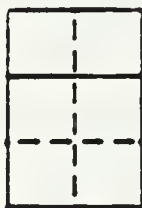
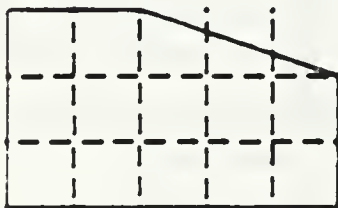


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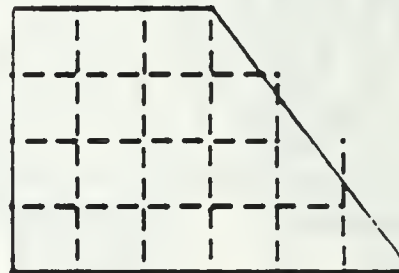


3

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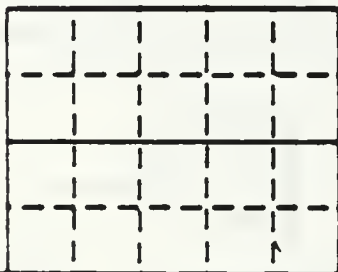


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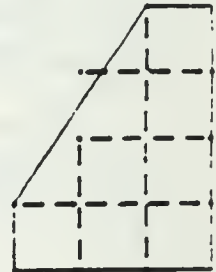
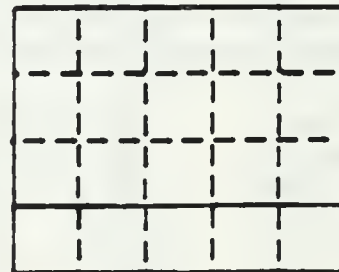
5

L



6

L



Program

48.0101

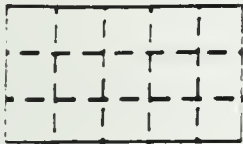
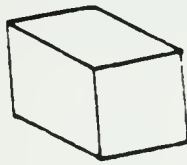
Task

420

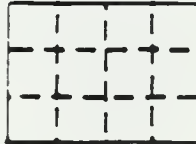
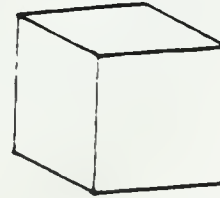
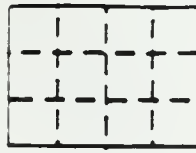
Page

10

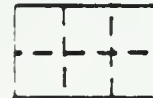
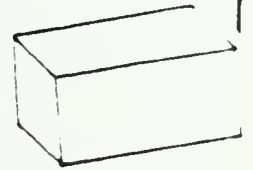
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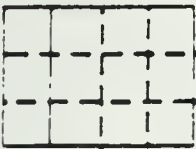
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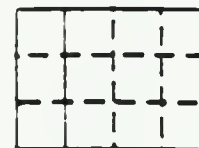
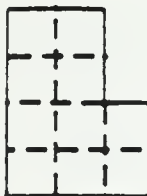
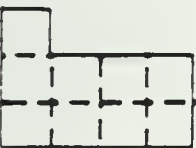
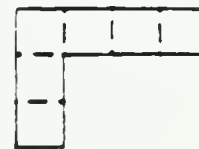
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5



6



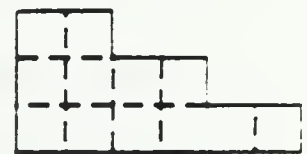
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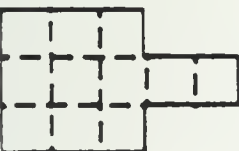
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9



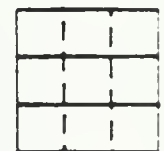
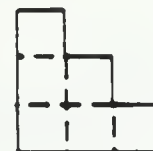
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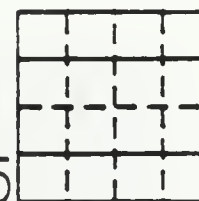
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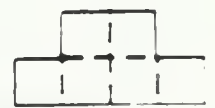
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15

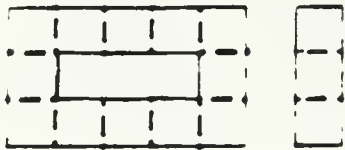
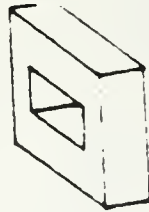


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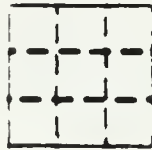
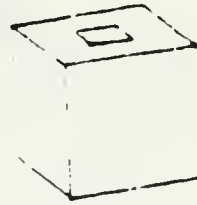
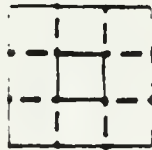


Program	Task	Page
48.0101	420	11

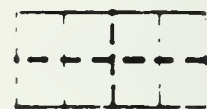
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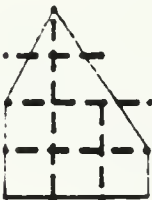
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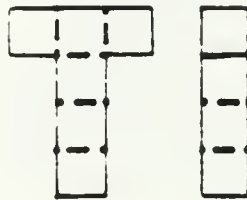
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4



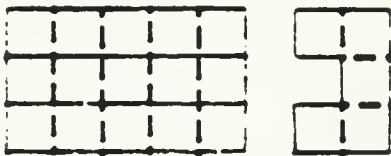
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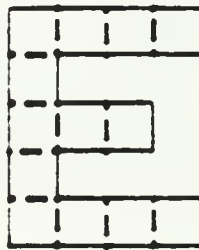
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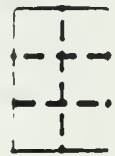
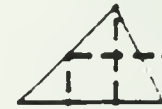
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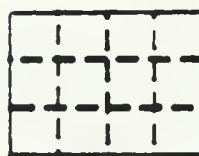
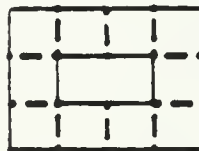
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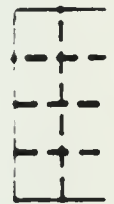
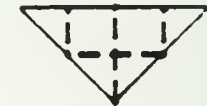
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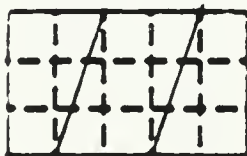
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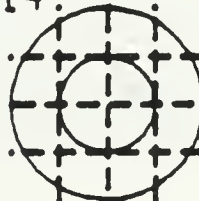
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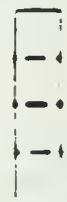
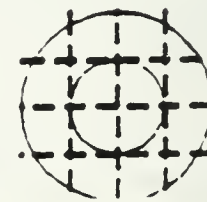
13



14



15





### APPENDIX III

#### Secretarial Office Occupations Learning Guide (Sample)



# Illinois State Board of Education

## Department of Adult, Vocational and Technical Education Research and Development Section

### Product Abstract

1. Title of material <sup>21</sup> - Information Processing/Computer Business Graphics/Spreadsheets/  
Telecommunications Learning Guides - titles listed on reverse side

2. Date material was completed FY86

3. Please check one: New material XX Revised material      Field-tested material XX

4. Originating agency Lake County Area Vocational Center

Address 19525 West Washington Street, Grayslake IL Zip Code 60030

5. Name(s) of developer(s) Janet Robinson

Lake County Area Vocational Center  
Address 19525 West Washington Street, Grayslake IL Zip Code 60030

6. Developed pursuant to Contract Number R-99-36-X-3.4-499

7. Subject Matter (Check only one according to Department of Education Code):

Code:

XX 01 Agricultural Education  
03 Business and Office Education  
04 Distributive Education  
07 Health Occupations Education  
09 Home Economics Education

10 Industrial Arts Education  
16 Technical Education  
17 Trade and Industrial Education  
22 Cooperative Education  
     Career Education  
     Other (Specify)     

8. Education Level:

XX Pre-K Thru 6 XX 7-8 9-10 XX 11-12  
XX Post-Secondary XX Adult      Teacher (Pre-service)  
     Administrator (Pre-Service)      Other (Specify)     

9. Intended for Use By:

XX Student XX Classroom Teacher XX Local Administrator  
     Teacher Educator      Guidance Staff      State Personnel  
     Other (Specify)     

10. Student Type:

XX Regular      Disadvantaged      Handicapped  
     Limited-English Proficiency      Other (Specify)     

11. Medium and Format of Materials:

XX HARDCOPY      VIDEOTAPE      FILM      MICROFICHE

No. of pages various      Minutes      Minutes      8 & W  
     Paper bound      8 & W      8 & W      Color  
     Hard bound      Color      Color  
XX Loose-leaf      inches      mm  
Photos: Yes      No       
Diagrams: Yes      No







LAKE  
COUNTY  
AREA  
VOCATIONAL  
CENTER

# COMPETENCY-BASED INDIVIDUALIZED VOCATIONAL EDUCATION INSTRUCTION

## STUDENT LEARNING GUIDE

Produced By ETE NORTHERN

Date 11/7/85

Adapted for use with PFS graph by Jan Robinson

**TASK:** IDENTIFY AND USE BUSINESS GRAPHICS OUTPUT DEVICES

**PURPOSE:** You may have a variety of different graphics output devices available for your use in an office. You should be familiar with the advantages and disadvantages of each device and with the operation of those available.

INFORMATION PROCESSING/COMPUTER BUSINESS GRAPHICS

Program	Task	Est.Time	Prereq.
S00	165.A.	1 hour	165.A.1



# LEARNING CONTRACT (optional)

## 1. STUDENT DATA

NAME \_\_\_\_\_

SOCIAL SECURITY NUMBER \_\_\_\_\_

LENGTH OF CONTRACT (NORMAL TIME IN HOURS) \_\_\_\_\_

## 2. TERMINAL PERFORMANCE OBJECTIVE

Given the needed workstation, software, and data diskette, retrieve and print a graph.

To master this task you must score 8 out of 8 on a product/performance checklist and score 9 out of 10 on a written criterion exam.

### 2a. INTERMEDIATE OBJECTIVE(s)

1. Identify and use business graphics output devices.

## 3. AGREEMENT

I, \_\_\_\_\_ agree to complete the above stated terminal performance requirement within \_\_\_\_\_ to \_\_\_\_\_. I further recognize that the conditions of the contract (performance and time agreement) report my ability to perform the requirements of the occupation and record my progress.

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Instructor's Signature  
(verifies competency)

Program	Task	Page
S00	165.A.2	2

# INTERMEDIATE OBJECTIVE #1

Identify and use business graphics output devices.

## LEARNING STEPS (Activities)

1. To learn about different types of output devices, see Resource #1.
2. To review, complete Resource #2.
3. To learn how to display graphs on the monitor, see Resource #3.
4. To learn how to print graphs using PFS graph software, see Resource #4.
5. To obtain practice in printing graphs, see Resource #5.
6. To measure your ability to identify and use business graphics output devices, see Resource 6A and 6B.

## RESOURCES

1. Read Information Sheet #1 on guide page 4.
2. Complete Job Sheet #1 on guide page 5.
3. Read pages 2-1 to 2-2 in PFS graph USERS MANUAL; complete practice.
4. Read pages 6-1 to 6-3 in PFS graph USERS MANUAL; complete practice.
5. Complete Job Sheet #2 on guide pages 6-8.
- 6A. Read terminal performance objective on guide page 9 and complete performance.
- 6B. Complete Written Criterion Exam 165.A.2.

Program	Task	Page
S00	165.A.2	3

## INFORMATION SHEET #1

165.A.2

### IDENTIFY AND USE BUSINESS GRAPHICS OUTPUT DEVICES

Output devices are the display devices, printers and plotters used to produce screen images and hard copies of graphs. Numerous types of display devices, printers, and plotters are available.

#### DISPLAY DEVICES

- (1) Cathode Ray Tube. The most common type used today is the CRT. It is similar to the picture tube of a television set. Text and pictures are displayed on this screen.
- (2) Flat Panel Display. The flat panel display is a liquid crystal (LCD) display which looks very similar to the game "Etch-a-Sketch." The flat panel display reduces the size and weight of the computer; however, the quality of the graphs displayed is not good.
- (3) Camera. Some manufacturers have developed special attachments to the CRT that will allow actual photographs of the CRT.

#### PRINTERS

- (1) Dot-Matrix Printer. The dot-matrix printer can be used to print business graphics. Color printers are available. When selecting a color dot-matrix printer, pay careful attention to the number of colors that can be printed.

#### PLOTTERS

- (1) Plotter. Plotters are drawing machines that draw lines with ink pens on paper and on transparencies. They present a better quality image than does the dot-matrix printer. Pens may be changed so that the graph is produced in a variety of colors.

JOB SHEET #1

IDENTIFY AND USE BUSINESS GRAPHICS OUTPUT DEVICES

165.A.2

DIRECTIONS: Write answers on blanks provided. Complete the statement or answer the question.

1. \_\_\_\_\_ printers may be used to print a business graph.
2. \_\_\_\_\_ use pens to draw a graph.
3. Pens come in a \_\_\_\_\_ of colors.
4. \_\_\_\_\_ gives the best quality printed image.
5. The \_\_\_\_\_ will draw on a transparency.
6. The \_\_\_\_\_ display provides a smaller, lighter computer; however, the quality is not especially good.
7. A camera \_\_\_\_\_ (may/may not) be used to photograph the screen.
8. The most common type of display method is the \_\_\_\_\_ or monitor.



## JOB SHEET #2

### USE BUSINESS GRAPHICS OUTPUT DEVICES

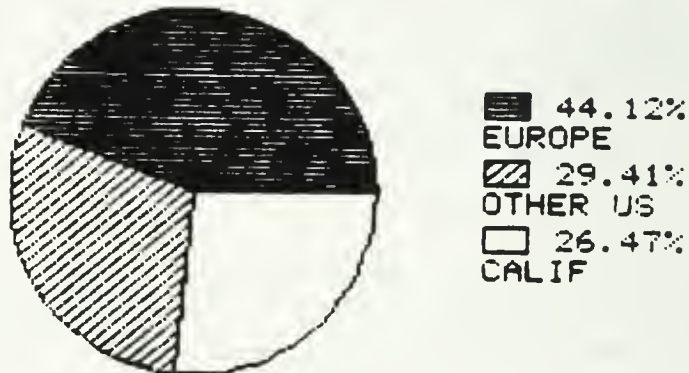
165.A.2

DIRECTIONS: Read the information presented in PFS GRAPH USERS MANUAL and complete projects as directed. Save any graphs you print. You must hand these in to your instructor. Check off projects as you complete them.

- \_\_\_\_ (1) Read pages 6-1 to 6-3 to see how to print a chart.
- \_\_\_\_ (2) Print a copy of the chart SALES. You will need to GET it from the CHART SAMPLER diskette. Follow the instructions given in PFS GRAPH USERS MANUAL on pages 6-3 to 6-6.
- \_\_\_\_ (3) Follow the instructions given on pages 6-1 to 6-3. Retrieve WINE PIE; print a copy. DISPLAY graph on monitor using DISPLAY.

A sample of your printed graph follows.

MAY '82 SHIPMENTS  
CABERNET



- \_\_\_\_ (4) Follow the instructions given on pages 6-1 to 6-3. Retrieve AGE; print using EXPANDED SIZE. A sample is shown on the page that follows.

Program	Task	Page
S00	165.A.2	6

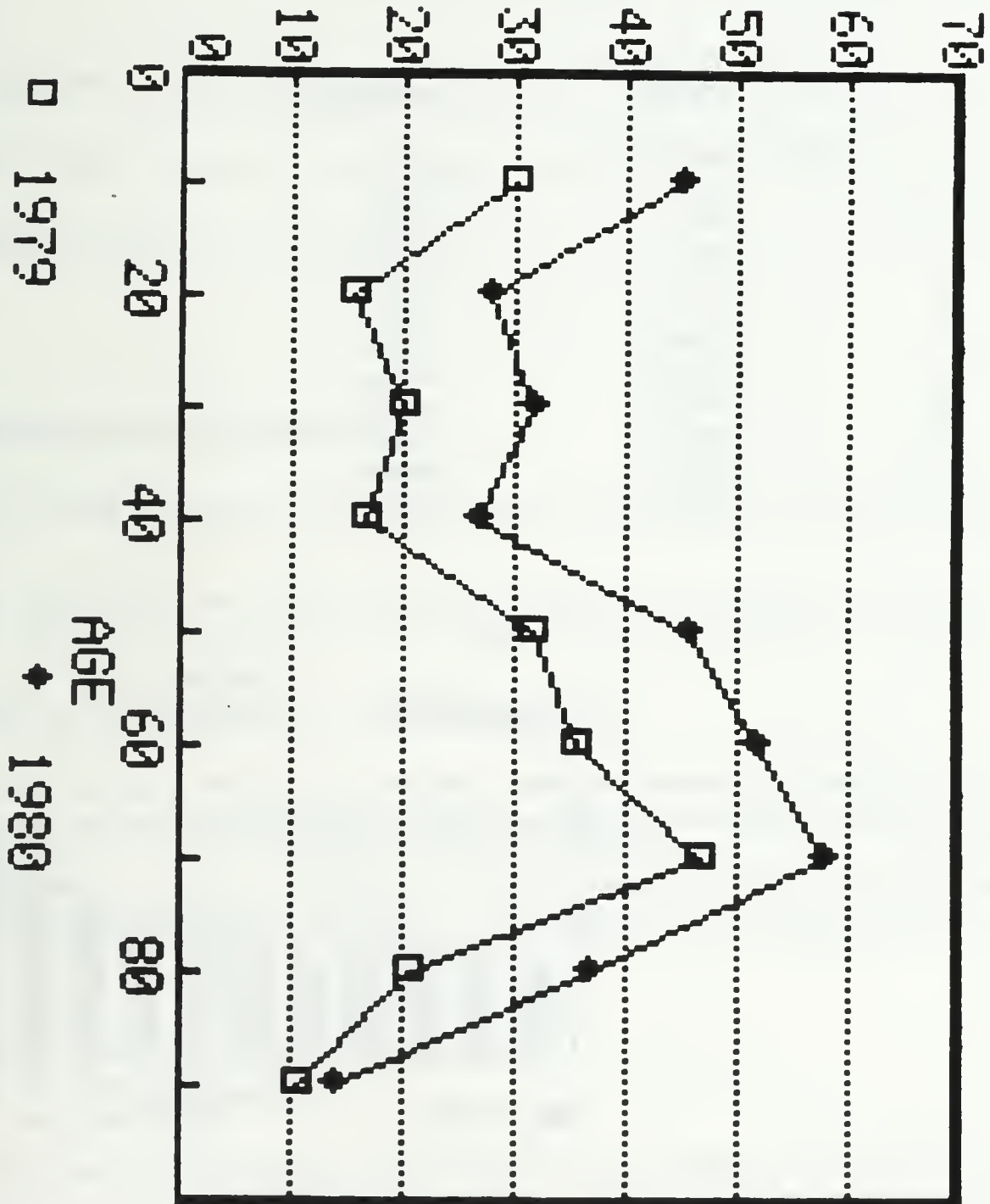


# JOB SHEET #2

USE BUSINESS GRAPHICS OUTPUT DEVICES

165.A.2

SAMPLE OF AGE PRINTED IN EXPANDED PRINT SHOWN BELOW.



Program	Task	Page
S00	165.A.2	7

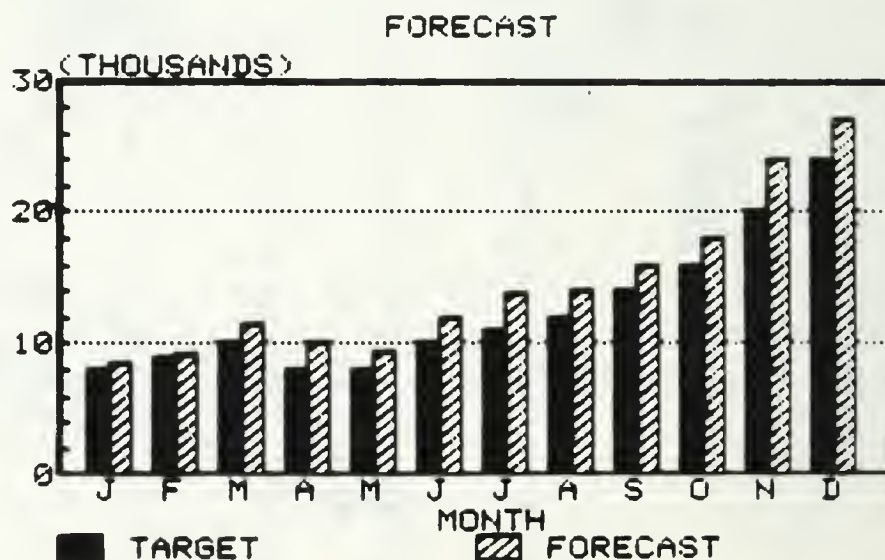
## JOB SHEET #2

### USE BUSINESS GRAPHICS OUTPUT DEVICES

165.A.2

- (5) Follow the instructions given on pages 6-1 to 6-3 of PFS GRAPH USERS MANUAL. Retrieve FORECAST; print both the graph and the data. Compare your printout with the graph that follows. Use DISPLAY to display on monitor.

	TARGET	FORECAST
1	8000	8500
2	9000	9300
3	10000	11500
4	8000	10000
5	8000	9500
6	10000	12000
7	11000	13800
8	12000	14160
9	14000	16000
10	16000	18000
11	20000	24000
12	24000	27000



## PERFORMANCE/PRODUCT CHECKLIST

Program: SECRETARIAL OFFICE OCCUPATIONS

Task No: 165.A.2

Student's Name: \_\_\_\_\_ Date Of Attempt: \_\_\_\_\_

Evaluator's Name: \_\_\_\_\_ Evaluation Site: \_\_\_\_\_

Performance Attempt: 1 2 3 4

### Terminal Performance Objective:

Given the needed workstation, software, and data diskette, retrieve and print a graph.

To master this task, you must score 8 out of 8 on a product/performance checklist and score 9 out of 10 on a written criterion exam.

### Directions To The Student:

Before attempting this task for mastery, carefully review this checklist. You will be evaluated on the basis of this checklist. When you feel you are ready for evaluation, contact your instructor. You must complete your performance within 15 minutes and must score at least 8 out of 8 points or 100 % for mastery. Critical items are marked with an asterisk (\*). These items must be satisfactorily completed.

### Directions To The Evaluator:

The student will contact you when ready for the evaluation. The student must complete the performance within 15 minutes and must score 8 out of 8 points or 100 % and all items marked with an asterisk (\*) must be satisfactorily completed.

Program	Task	Page
S00	165.A.2	9

## PERFORMANCE/PRODUCT CHECKLIST

Student must complete all items listed below to master this task.

YES      NO

- |     |     |   |
|-----|-----|---|
| ___ | ___ | 1. Student loaded GRAPH AND SAMPLER diskettes.                |
| ___ | ___ | 2. Student retrieved specified graph and displayed on screen. |
| ___ | ___ | 3. Student selected PRINT/PLOT.                               |
| ___ | ___ | 4. Student printed graph using a dot-matrix printer.          |
| ___ | ___ | 5. Student printed graph in expanded size.                    |
| ___ | ___ | 6. Student printed graph with data.                           |
| ___ | ___ | 7. Student accomplished the above with no assistance.         |
| ___ | ___ | 8. Student removed diskettes and turned computer off.         |

PROJECT SUMMARY SHEET

IDENTIFY AND USE BUSINESS GRAPHICS OUTPUT DEVICES

165.A.2

JOB SHEET #1

JOB SHEET #2

WINE PIE

AGE

FORECAST

PERFORMANCE

WRITTEN CRITERION EXAM #165.A.2

NAME \_\_\_\_\_ DATE \_\_\_\_\_

SCORE \_\_\_\_\_



WRITTEN CRITERION EXAM

IDENTIFY AND USE BUSINESS GRAPHICS OUTPUT DEVICES

165.A.2

The purpose of this exam is to determine whether or not you have understood the information presented on identifying and using various computer business graphics output devices.

The questions are multiple choice. Choose the answer that best completes the statement or answers the question.

You must score 90 percent or have 9 out of 10 questions correct to master this task.

Program	Task	Page
S00	165.A.2	1

## EVALUATION SHEET

### IDENTIFY AND USE COMPUTER GRAPHICS OUTPUT DEVICES

DIRECTIONS: Write the letter that comes before the correct answer on the line provided. Choose the word, number, or phrase that best completes the statement or answers the question.

- \_\_\_\_\_ 1. \_\_\_\_\_ devices are used to make hard copies of computer business graphics.
- a. dot-matrix printers
  - b. plotters
  - c. daisy-wheel printers
  - d. both a and b
  - e. both b and c
- \_\_\_\_\_ 2. \_\_\_\_\_ may be used to display graphics so they may be viewed before they are printed.
- a. flat panel display
  - b. monitor
  - c. cathode ray tube
  - d. all of the above
- \_\_\_\_\_ 3. \_\_\_\_\_ gives a poor quality image when viewed on a screen.
- a. flat panel display
  - b. monitor
  - c. cathode ray tube
  - d. none of the above
- \_\_\_\_\_ 4. \_\_\_\_\_ is the most common type of display screen.
- a. flat panel
  - b. cathode ray tube
  - c. none of the above
- \_\_\_\_\_ 5. \_\_\_\_\_ may not be used for word processing printing applications.
- a. dot-matrix printer
  - b. plotter
  - c. both a and b
- \_\_\_\_\_ 6. \_\_\_\_\_ will print/draw on a transparency.
- a. dot-matrix printer
  - b. plotter
  - c. both a and b

- \_\_\_\_\_ 7. \_\_\_\_\_ provides the best hard copy of a graph.
- a. dot-matrix printer
  - b. daisy printer
  - c. plotter
  - d. makes no difference
- \_\_\_\_\_ 8. Select \_\_\_\_\_ to print a hard copy of a graph using the PFS GRAPH software package.
- a. DISPLAY
  - b. PRINT/PLOT
  - c. GET/EDIT
  - d. DEFINE
- \_\_\_\_\_ 9. Select \_\_\_\_\_ to display a graph on the monitor using the PFS GRAPH software package.
- a. DISPLAY
  - b. PRINT/PLOT
  - c. GET/EDIT
  - d. DEFINE
- \_\_\_\_\_ 10. PFS GRAPH allows the user to make the following selections when printing on a dot-matrix printer:
- a. Expanded size print
  - b. Print a list of data points
  - c. None of the above
  - d. Both a and b

APPENDIX IV

Child Care Learning Guide  
(Sample)





# Illinois State Board of Education

## Department of Adult, Vocational and Technical Education Research and Development Section

### Product Abstract

1. Title of material 4 Child Care computer software learning guides - titles listed on reverse side

2. Date material was completed FY86

3. Please check one: New material ☒ Revised material ☐ Field-tested material ☒

4. Originating agency Lake County Area Vocational Center  
Address 19525 West Washington Street, Grayslake IL Zip Code 60030

5. Name(s) of developer(s) Joanne Fielding  
Lake County Area Vocational Center  
Address 19525 West Washington Street, Grayslake IL Zip Code 60030

6. Developed pursuant to Contract Number R-99-36-X-3.4-499

7. Subject Matter (Check only one according to Department of Education Code):  
Code:

<input type="checkbox"/> 01 Agricultural Education	<input type="checkbox"/> 10 Industrial Arts Education
<input type="checkbox"/> 03 Business and Office Education	<input type="checkbox"/> 16 Technical Education
<input type="checkbox"/> 04 Distributive Education	<input type="checkbox"/> 17 Trade and Industrial Education
<input type="checkbox"/> 07 Health Occupations Education	<input type="checkbox"/> 22 Cooperative Education
<input checked="" type="checkbox"/> 09 Home Economics Education	<input type="checkbox"/> Career Education
	<input type="checkbox"/> Other (Specify) _____

8. Education Level:

<input checked="" type="checkbox"/> Pre-K Thru 6	<input checked="" type="checkbox"/> 7-8	<input type="checkbox"/> 9-10	<input checked="" type="checkbox"/> 11-12
<input type="checkbox"/> Post-Secondary	<input type="checkbox"/> Adult	<input type="checkbox"/> Teacher (Pre-service)	
<input type="checkbox"/> Administrator (Pre-Service)		<input type="checkbox"/> Other (Specify) _____	

9. Intended for Use By:

<input checked="" type="checkbox"/> Student	<input checked="" type="checkbox"/> Classroom Teacher	<input checked="" type="checkbox"/> Local Administrator
<input type="checkbox"/> Teacher Educator	<input type="checkbox"/> Guidance Staff	<input type="checkbox"/> State Personnel
<input type="checkbox"/> Other (Specify) _____		

10. Student Type:

<input checked="" type="checkbox"/> Regular	<input type="checkbox"/> Disadvantaged	<input type="checkbox"/> Handicapped
<input type="checkbox"/> Limited-English Proficiency	<input type="checkbox"/> Other (Specify) _____	

11. Medium and Format of Materials:

<input checked="" type="checkbox"/> HARDCOPY	<input type="checkbox"/> VIDEOTAPE	<input type="checkbox"/> FILM	<input type="checkbox"/> MICROFICHE
No. of pages <u>various</u>	<input type="checkbox"/> Minutes	<input type="checkbox"/> Minutes	<input type="checkbox"/> 3 & W
<input type="checkbox"/> Paper bound	<input type="checkbox"/> 8 & W	<input type="checkbox"/> 3 & W	<input type="checkbox"/> Color
<input type="checkbox"/> Hard bound	<input type="checkbox"/> Color	<input type="checkbox"/> Color	
<input checked="" type="checkbox"/> Loose-leaf	<input type="checkbox"/> inches	<input type="checkbox"/> mm	
Photos: Yes <input type="checkbox"/> No <input type="checkbox"/>			
Diagrams: Yes <input type="checkbox"/> No <input type="checkbox"/>			

☐ SLIDES ☐ FILM STRIPS ☐ AUDIO ☐ OTHER

No. of frames ☐ B & W ☐ Color ☐ Audio ☐ Carousel provided ☐ Other packaging used (Specify) \_\_\_\_\_  
No. of frames ☐ B & W ☐ Color ☐ Audio \_\_\_\_\_  
☐ Automatic synch \_\_\_\_\_ Hz ☐ Manual cue \_\_\_\_\_  
☐ Real ☐ Cassette ☐ Cartridge \_\_\_\_\_  
Specify: \_\_\_\_\_

12. Availability:

☐ One copy free ☐ For sale @ \$ \_\_\_\_\_ per copy ☐ Not available  
☒ In ERIC system (No. \_\_\_\_\_) ☐ Loan copy available  
Contact: Name Illinois Vocational Curriculum Center Phone ( ) \_\_\_\_\_  
Sangamon State University, F2  
Address Springfield IL 62708 Zip Code \_\_\_\_\_

13. Copyright Restrictions:

Contact: Name None Phone ( ) \_\_\_\_\_  
Address \_\_\_\_\_ Zip Code \_\_\_\_\_

14. What level(s) of assistance is required to provide implementation of this outcome?

☐ awareness ☒ understanding  
☐ deciding ☒ implementing

15. Are Consultative/Inservice (or staff development) available? Yes ☒ No ☐  
For FY87 only

Contact: Illinois State Board of Education  
Department of Adult, Vocational and Technical Education  
Research and Development Section, E-426  
100 North First Street  
Springfield, IL 62777  
(217) 782-4620

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how it is organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or on another sheet, if necessary.)

Competency-based learning guides for utilizing child care software on a microcomputer

17. Person Completing this Abstract: Richard W. Glogovsky  
Lake County Area Vocational Center  
Full Address: 19525 West Washington Street  
Grayslake IL 60030

LEARNING GUIDE TITLES:

- \* 35.01 - Use the microcomputer to teach letter recognition concepts
- 35.02 - Use the microcomputer to teach number concepts
- 35.03 - Use the microcomputer to teach concept of opposites
- 35.04 - Use the microcomputer to teach concept of shapes

\* Sample



LAKE  
COUNTY  
AREA  
VOCATIONAL  
CENTER

# COMPETENCY-BASED INDIVIDUALIZED VOCATIONAL EDUCATION INSTRUCTION

## STUDENT LEARNING GUIDE

Produced By Joanne Fielding

Revised  
Date April 1986

### THE STICKYBEAR ABC SOFTWARE PROGRAM

**TASK:** Use the microcomputer to teach letter recognition concepts

**PURPOSE:** This learning guide will introduce the Child Care student to the use of the microcomputer in teaching letter recognition concepts to preschool age children.

CHILD CARE OCCUPATIONS 20.0201

Program	Task	Est.Time	Prereq.
Child Care	35.01	1 hour	None



# LEARNING CONTRACT (optional)

## 1. STUDENT DATA

NAME \_\_\_\_\_

SOCIAL SECURITY NUMBER \_\_\_\_\_

LENGTH OF CONTRACT (NORMAL TIME IN HOURS) \_\_\_\_\_

## 2. TERMINAL PERFORMANCE OBJECTIVE

Provided with microcomputer, the Stickybear ABC software program, teacher demonstration, and practice time, the student will use the Stickybear ABC software program to teach letter recognition concepts. The student will be able to score 8 out of 10 points or 80% on the performance/product checklist, and will complete the Job Sheet at the 80% level.

### 2a. INTERMEDIATE OBJECTIVE(s)

1. Become familiar with the Stickybear ABC software program. Complete items on the performance/product checklist at 80% level.
2. Use the Stickybear ABC software program with preschool case study child. Complete Job Sheet at the 80% level.

## 3. AGREEMENT

I, \_\_\_\_\_ agree to complete the above stated terminal performance requirement within \_\_\_\_\_ to \_\_\_\_\_. I further recognize that the conditions of the contract (performance and time agreement) report my ability to perform the requirements of the occupation and record my progress.

Student's Signature \_\_\_\_\_

Instructor's Signature  
(verifies competency) \_\_\_\_\_

Program	Task	Page
Child Care	35.01	2

# INTERMEDIATE OBJECTIVE #1

Become familiar with the Stickybear ABC software program. Complete items on performance product checklist at 80% level.

## LEARNING STEPS (Activities)

1. To learn the purpose of the Stickybear ABC software program read Resource #1.
2. To view the Stickybear ABC software program, follow the directions as stated in Resource #2.
3. To practice using the microcomputer and the Stickybear ABC software program as presented in teacher demonstration follow procedure listed on Resource #3.
4. When you feel you can use the Stickybear ABC software program to teach letter recognition concepts, see Resource #4 for evaluation.
5. If evaluation on Performance Product checklist is 80% or above, proceed to Intermediate Objective #2.

## RESOURCES

1. Information Sheet #1, page 4, in this learning guide.
2. See instructor for scheduled date and time of demonstration of using the Stickybear ABC software program.
3. Procedure Sheet #1, page 5, in this learning guide.
4. Performance Product Checklist on Task 35.01, pages 6-7, in this learning guide. See instructor for evaluation.
5. Intermediate Objective #2, page 8, in this learning guide.

Program	Task	Page
Child Care	35.02	3



## INFORMATION SHEET #1

### What Is Stickybear ABC?

Stickybear ABC is a computer program designed to familiarize preschool children with letter recognition concepts. It is for ages three to six. As young children gain experience with the program, they will begin to recognize and name the letters. Older children begin to recognize the words presented on sight. Some of the words on the program and in The Look Book (included with the program) may be unfamiliar. So this is a good way to introduce new words and their meanings to young children.

Children learn best by experimenting themselves. As you work with your case study child, resist the impulse to intervene in the discovery process. If you wish to view other letters, do this before you work with your child. Allow your child to discover (without telling him/her) that pressing a letter key produces a picture. If a child presses keys other than letters nothing will happen. If they ask you why, say to them, "Did you press a letter key?" This will also make them aware that there are numbers and other keys on the keyboard besides letters. Eventually children will find that there are two picture displays for each letter.

Most children will require little or no guidance. However, if a little assistance is required, try phrasing your suggestion in question form. If a child hesitates to start, ask "What letter would you like to do first?" By making suggestions in question form, it allows the child to feel that he/she is in control.

Children often experiment with the program in ways difficult for adults to understand. Some children may appear to be randomly pressing keys when they are actually testing the "rule" that nonletter keys produce no effect. Some children like to watch the same display for much longer than adults would. Others press the keys too quickly for the computer to register. Try not to impose "adult" order on children's experimentation. It might interrupt the learning process.

Encourage your case study child to talk about each picture that appears. Younger children will need help identifying some of the objects. Ask your child to identify the picture display by name. Adults easily read the letters and words and can give the "correct" response. But your child may look at the J (bear jumping) display and say, "Bear." "Cry" could be tears. "Queen" could be crown. To get the response that goes with the letter ask "What is Stickybear doing?" If a child gives an appropriate response based on the picture but not the "correct" one, give him/her some positive reinforcement.

If your case study child is older, ask him/her to name the letter in the picture. Try starting with the first letter of your child's name.

Some children will immediately enjoy Stickybear ABC. Be patient. Introduce the activities in small doses. Younger children have a shorter attention span, and may only view four or five pictures. And remember, if your case study child is a three-year-old, talk mainly about the pictures that appear, as he/she may not be able to name any of the letters. Make positive statements about the child's comments to keep his/her self-concept high.

Program	Task	Page
Child Care	35.01	4

## PROCEDURE SHEET #1

### Using the Stickybear ABC Software Program

Directions: After attending the teacher demonstration on the use of the Stickybear ABC software program practice using the program before attempting to do the activity with your case study child. Follow the steps listed below.

1. Put the diskette into Drive #1, being careful to hold it by the label only. Close door on drive.
2. Locate the switch to turn on the computer and the monitor. Turn on.
3. Make sure CAPS LOCK key is down to run this software program.
4. Press any letter to get the program started.
5. Press the same letter again after picture is displayed to see what happens is the same letter is pressed twice.
6. Press keys that are not letters to see what will happen.
7. Refer to Stickybear ABC poster. Practice what you will say to your child when using it.
8. Practice what you will say to your case study child to encourage them to match the letter that appears on the monitor to the letter on the keyboard.
9. When you feel you know how to use this software program correctly see instructor to complete the items on the performance product checklist for an evaluation.
10. Turn off microcomputer and monitor and store diskette as demonstrated by instructor.

Program	Task	Page
Child Care	35.01	5

## PERFORMANCE/PRODUCT CHECKLIST

Program: Child Care

Task No: 35.01

Student's Name: \_\_\_\_\_ Date Of Attempt: \_\_\_\_\_

Evaluator's Name: \_\_\_\_\_ Evaluation Site: \_\_\_\_\_

Performance Attempt: 1 2 3 4

### Terminal Performance Objective:

Provided with microcomputer, The Stickybear ABC software program, teacher demonstration, and practice time, the student will use the Stickybear ABC software program to teach letter recognition concepts. The student will be able to score 8 out of 10 points or 80% on the performance/product checklist.

### Directions To The Student:

Before attempting this task for mastery, carefully review this checklist. You will be evaluated on the basis of this checklist. When you feel you are ready for evaluation, contact your instructor. You must complete your performance within 10 minutes and must score at least 8 out of 10 points or 80 % for mastery. Critical items are marked with an asterisk (\*). These items must be satisfactorily completed.

### Directions To The Evaluator:

The student will contact you when ready for the evaluation. The student must complete the performance within 10 minutes and must score 8 out of 10 points or 80 % and all items marked with an asterisk (\*) must be satisfactorily completed.

Program	Task	Page
Child Care	35.01	6



CRITICAL ITEMS	ITEMS TO BE OBSERVED OR CHECKED	RATING	
		YES	NO
	TASK 35.01 - USE MICROCOMPUTER TO TEACH LETTER RECOGNITION CONCEPTS		
*	1. Held diskette properly and inserted into disc drive properly.		
*	2. Located microcomputer switch and monitor switch and turned computer on properly.		
*	3. Depressed CAPS LOCK key.		
*	4. Pressed appropriate keys to make program run.		
*	5. Demonstrated use of an appropriate statement to familiarize child to activity.		
*	6. Demonstrated use of an appropriate statement to encourage child to match letter that appears on the monitor to the same letter on the keyboard.		
*	7. Demonstrated use of an appropriate statement to encourage child to respond to the letter and picture that appears.		
	8. Referred to Stickybear ABC poster on wall at appropriate times during activity.		
	9. Referred to <u>The Look Book</u> (included with the program) at appropriate times during the activity.		
*	10. Turned off microcomputer and monitor at completion of evaluation and stored diskette properly.		
TOTAL POINTS EARNED -			
POINTS NEEDED FOR MASTERY -			
TOTAL POINTS POSSIBLE -			

# INTERMEDIATE OBJECTIVE #2

Use the Stickybear ABC software program with preschool case study child.  
Complete Job Sheet at the 80% level.

## LEARNING STEPS (Activities)

1. To familiarize your case study child with letter recognition concepts, view Resource #1 with your case study child.
2. To record observations of preschool child, complete Resource #2.
3. Upon completion of Intermediate Objective #2, turn in learning guide for evaluation of job sheet. Job sheet must be completed at the 80% level.

## RESOURCES

1. The Stickybear ABC software program, by Optimum Resource, Inc., 1982. See instructor for software program.
2. Job Sheet #2, pages 9-10, in this learning guide.
3. Hand in to instructor.

Program	Task	Page
Child Care	35.01	8



## JOB SHEET #1

Evaluation: Must be completed at  
80% level - B level

Student's Name \_\_\_\_\_  
Date and Time \_\_\_\_\_  
Session \_\_\_\_\_

Estimated time to complete this activity - 10-15 minutes

### Using the Stickybear ABC Software Program

Introducing Activity to Preschool Child: Familiarize child to picture and letter recognition by looking at the Stickybear ABC poster on wall. Talk about the pictures.

Directions for Using Computer: As you put the diskette into Drive #1, explain to the child that the diskette must be held by the label only. Also tell the child that the door on the drive must be closed so that the program will run. Turn on the computer and monitor. CAPS LOCK KEY MUST BE DOWN TO RUN THIS PROGRAM. You will see the title panel displayed. The next frame appears stating to press any letter. Instead of telling the child to do this LET THE CHILD EXPLORE AND DISCOVER THAT PRESSING A LETTER PRODUCES A PICTURE DISPLAY.

Please list the child's name: \_\_\_\_\_ Age: \_\_\_\_\_

### Computer Activity:

1. Describe the child's reaction to seeing the first picture appear on the monitor.

---

---

2. Talk with the child about the first letter picture that appears on the monitor. LET THE CHILD TELL YOU ABOUT THE PICTURE. Record what the child says or does.

---

---

3. Continue to allow the child to explore and discover other letter keys. Most children will require little or no guidance. If your child hesitates to start, ask "What letter would you like to do next?" List the letters chosen by your child and the word that appears. Also record the child's response to the letter and picture that appears.

LETTER AND WORD

CHILD'S RESPONSE

---

---

---

(continue to record child's responses on next page)

Program	Task	Page
Child Care	35.01	9

## JOB SHEET #1 (cont.)

Using the Stickybear ABC Software Program (cont.)

### LETTER AND WORD

### CHILD'S RESPONSE


4. Some of the children are not ready to name letters, but may be ready to match letters that are alike. When a letter appears on the monitor say to the child, "See if you can find this same letter on the keyboard?" Record the child's response to your suggestion.


5. Comment on the child's attention span for this activity. \_\_\_\_\_


6. List any problems you encountered as you completed this activity with your case study child.


7. What changes would you make if you repeat this activity? \_\_\_\_\_


## STUDENT PROGRESS CHECKLIST

### The Stickybear ABC Software Program

Task 35.01 - Use the microcomputer to teach letter recognition concepts

#### Intermediate Objective #1

- \_\_\_\_\_ Read about the Stickybear ABC software program
- \_\_\_\_\_ Attend demonstration session to view the Stickybear ABC program
- \_\_\_\_\_ Practice using software program following directions on Procedure Sheet #1
- \_\_\_\_\_ Demonstrate items on Performance Product Checklist for evaluation by instructor

#### Intermediate Objective #2

- \_\_\_\_\_ Use the Stickybear ABC software program with your case study child
- \_\_\_\_\_ Complete Job Sheet #1
- \_\_\_\_\_ Hand in Job Sheet to instructor for evaluation

Program	Task	Page
Child Care	35.01	11



## APPENDIX V

### Medical Assisting Learning Guide (Sample)





Illinois State Board of Education  
Department of Adult, Vocational and Technical Education  
Research and Development Section

Product Abstract

1. Title of material 3 Medical Assisting clinical learning guides - titles listed on reverse side
2. Date material was completed FY86
3. Please check one: New material ☒ Revised material ☐ Field-tested material ☒
4. Originating agency Lake County Area Vocational Center  
19525 West Washington Street  
Address Grayslake IL 60030 Zip Code
5. Name(s) of developer(s) Rose Meyer  
Lake County Area Vocational Center  
Address 19525 West Washington Street, Grayslake IL Zip Code 60030
6. Developed pursuant to Contract Number R-99-36-X-3.4-499

7. Subject Matter (Check only one according to Department of Education Code):

Code

- |   |  |
|---|--|
| <input type="checkbox"/> 01 Agricultural Education                  | <input type="checkbox"/> 10 Industrial Arts Education      |
| <input type="checkbox"/> 03 Business and Office Education           | <input type="checkbox"/> 16 Technical Education            |
| <input type="checkbox"/> 04 Distributive Education                  | <input type="checkbox"/> 17 Trade and Industrial Education |
| <input checked="" type="checkbox"/> 07 Health Occupations Education | <input type="checkbox"/> 22 Cooperative Education          |
| <input type="checkbox"/> 09 Home Economics Education                | <input type="checkbox"/> Career Education                  |
|   | <input type="checkbox"/> Other (Specify) <u>        </u>   |

8. Education Level:

- |  |   |  |   |
|--|---|--|---|
| <input checked="" type="checkbox"/> Pre-K Thru 6     | <input type="checkbox"/> 7-8              | <input type="checkbox"/> 9-10                            | <input checked="" type="checkbox"/> 11-12 |
| <input type="checkbox"/> Post-Secondary              | <input checked="" type="checkbox"/> Adult | <input type="checkbox"/> Teacher (Pre-service)           |   |
| <input type="checkbox"/> Administrator (Pre-Service) |   | <input type="checkbox"/> Other (Specify) <u>        </u> |   |

9. Intended for Use By:

- |  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> Student              | <input checked="" type="checkbox"/> Classroom Teacher | <input checked="" type="checkbox"/> Local Administrator |
| <input type="checkbox"/> Teacher Educator                | <input type="checkbox"/> Guidance Staff               | <input type="checkbox"/> State Personnel                |
| <input type="checkbox"/> Other (Specify) <u>        </u> |   |   |

10. Student Type:

- |  |  |                                      |
|--|--|--------------------------------------|
| <input checked="" type="checkbox"/> Regular          | <input type="checkbox"/> Disadvantaged                   | <input type="checkbox"/> Handicapped |
| <input type="checkbox"/> Limited-English Proficiency | <input type="checkbox"/> Other (Specify) <u>        </u> |                                      |

11. Medium and Format of Materials:

- |  |                                    |                                  |                                     |
|--|------------------------------------|----------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> HARDCOPY                       | <input type="checkbox"/> VIDEOTAPE | <input type="checkbox"/> FILM    | <input type="checkbox"/> MICROFICHE |
| No. of pages <u>various</u>  | <input type="checkbox"/> Minutes   | <input type="checkbox"/> Minutes | <input type="checkbox"/> 3 & W      |
| <input type="checkbox"/> Paper bound                               | <input type="checkbox"/> 3 & W     | <input type="checkbox"/> 3 & W   | <input type="checkbox"/> Color      |
| <input type="checkbox"/> Hard bound                                | <input type="checkbox"/> Color     | <input type="checkbox"/> Color   |                                     |
| <input checked="" type="checkbox"/> Loose-leaf                     | <input type="checkbox"/> inches    | <input type="checkbox"/> mm      |                                     |
| Photos: Yes <input type="checkbox"/> No <input type="checkbox"/>   |                                    |                                  |                                     |
| Diagrams: Yes <input type="checkbox"/> No <input type="checkbox"/> |                                    |                                  |                                     |

☐ SLIDES

☐ FILM STRIPS

☐ AUDIO

☐ OTHER

No. of frames \_\_\_\_\_

No. of frames \_\_\_\_\_

☐ Automatic synch

Specify: \_\_\_\_\_

☐ 8 8 W

☐ 8 8 W

☐ \_\_\_\_\_ Hz

☐ Color

☐ Color

☐ Manual cue

☐ Audio

☐ Audio

☐ Reel

☐ Carousel provided

☐ Cassette

☐ Other packaging used

☐ Cartridge

(Specify) \_\_\_\_\_

12. Availability:

☐ One copy free

For sale @ \$ \_\_\_\_\_ per copy

☐ Not available

☒ In ERIC system IN \_\_\_\_\_

☐ Loan copy available

Contact: Name Illinois Vocational Curriculum Center

Phone ( ) \_\_\_\_\_

Sangamon State University, F2

Address Springfield IL 62708

Zip Code \_\_\_\_\_

13. Copyright Restrictions:

Contact: Name None

Phone ( ) \_\_\_\_\_

Address \_\_\_\_\_

Zip Code \_\_\_\_\_

14. What level(s) of assistance is required to provide implementation of this outcome?

☐ awareness

☒

understanding

☐ deciding

☒

implementing

15. Are Consultative/Inservice (or staff development) available? Yes ☒ No ☐  
For FY87 only

Contact: Illinois State Board of Education  
Department of Adult, Vocational and Technical Education  
Research and Development Section, E-426  
100 North First Street  
Springfield, IL 62777  
(217) 787-4820

16. General Description (State the general objective and suggested method of use. Summarize the content and tell how it is organized. Write the description so that it can be used to promote the material. Continue on back of this sheet or on another sheet, if necessary.)

Competency-based learning guides for medical assisting clinical lab work

17. Person Completing this Abstract: Richard W. Glogovsky

Lake County Area Vocational Center

Full Address:

19525 West Washington Street

Grayslake IL 60030

LEARNING GUIDE TITLES:

\* Task 060A - Label clinical specimens

Task 060B - Distribute clinical specimens

Task 060C - Log clinical specimens

\* Sample



LAKE  
COUNTY  
AREA  
VOCATIONAL  
CENTER

# COMPETENCY-BASED INDIVIDUALIZED VOCATIONAL EDUCATION INSTRUCTION

## STUDENT LEARNING GUIDE

Produced By ROSEMARIE MEYER, RN, BS Date 12/85

**TASK:** LABEL CLINICAL SPECIMENS

**PURPOSE:** AFTER CLINICAL SPECIMENS HAVE BEEN COLLECTED, THEY MUST BE PREPARED FOR LABORATORY ANALYSIS. THIS PREPARATION CONSISTS OF LABELING SPECIMEN CONTAINERS, DISTRIBUTING SPECIMENS TO THE PROPER LABORATORY SECTION, LOGGING SPECIMENS IN THE SECTION'S RECORD BOOK, SEPARATING SPECIMENS INTO THE PROPER COMPONENTS FOR ANALYSIS AND PREPARING THE SPECIMEN FOR MAILING IF THE TESTS ON THEM ARE PERFORMED ELSEWHERE.

ALTHOUGH MOST OF THE ABOVE PROCEDURES ARE SIMPLE AND SOMEWHAT ROUTINE, THEIR IMPORTANCE CANNOT BE OVERSTRESSED. IMPROPER PREPARATION OF CLINICAL SPECIMENS COULD CAUSE THE SUBSEQUENT LABORATORY ANALYSIS TO BE INVALID, THUS OBTAINING ERRONEOUS RESULTS, AND ULTIMATELY REQUIRING A NEW SPECIMEN. LOSS OF TIME, WITH A POSSIBLE DELAY IN THE TREATMENT OF A PATIENT, COULD OCCUR. THIS LEARNING GUIDE WILL ASSIST YOU IN LABELING CLINICAL SPECIMENS.

MEDICAL ASSISTING

emf

Program	Task	Est.Time	Prereq.
07.0904	060A	4 HRS.	-



# LEARNING CONTRACT (optional)

## 1. STUDENT DATA

NAME

4 HOURS

SOCIAL SECURITY NUMBER

LENGTH OF CONTRACT (NORMAL TIME IN HOURS)

## 2. TERMINAL PERFORMANCE OBJECTIVE

GIVEN LABORATORY SPECIMENS, NECESSARY TOOLS AND EQUIPMENT AND LABORATORY FORMS, YOU WILL LABEL CLINICAL SPECIMENS. TO MASTER THIS TASK YOU MUST PASS A PERFORMANCE EVALUATION OF 26 (100%) AND A WRITTEN CRITERION EXAMINATION OF 9 OUT OF 10 (90%).

### 2a. INTERMEDIATE OBJECTIVE(s)

1. Describe labeling clinical specimens.
2. Label clinical specimens.

## 3. AGREEMENT

I, \_\_\_\_\_ agree to complete the above stated terminal performance requirement within \_\_\_\_\_ to \_\_\_\_\_. I further recognize that the conditions of the contract (performance and time agreement) report my ability to perform the requirements of the occupation and record my progress.

Student's Signature

Instructor's Signature  
(verifies competency)

Program	Task	Page
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# INTERMEDIATE OBJECTIVE #1

DESCRIBE LABELING CLINICAL SPECIMENS.

## LEARNING STEPS (Activities)

1. Read Resource #1 for information on labeling clinical specimens.
2. Complete Resource #2 for a review on labeling clinical specimens.
3. Proceed to Resource #3.

## RESOURCES

1. Information Sheet 060A-001-001, "Labeling Clinical Specimens," Pages 2 - 6, in this SLG.
2. Job Sheet 060A-001-002, "Review Labeling Clinical Specimens," Page 8-9, in this SLG.

See activity key for answers.

3. IO #2, Page 10 , in this SLG.

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# INFORMATION SHEET

060-001-001

## "LABELING CLINICAL SPECIMENS"

After specimens have been collected, it is necessary to complete the request slip and identify the clinical specimen with a label. The label is then attached to the specimen, providing information that will positively identify the specimen even if two patients have identical names.

Every hospital and private clinical laboratory uses request slips and labels; although the labels are not identical in style and format, they all require similar data. This is a result of general agreement that certain information is essential to identify the specimen. All sections of the request slip and label must be completed. If not, a specimen may be lost. Two or more patients having the same name must be differentiated from one another by additional data such as an identification number (a different number is assigned to each patient). If required information is not placed on the label, a report may be recorded on the wrong patient's chart, possibly causing an erroneous diagnosis by the physician.

In this lesson you will learn to fill in a typical request form and specimen label. A sample request form (requisition) is shown below.

SAMPLE LABORATORY REQUEST FORM			
Patient's Name <u>Evers, Clarence R.</u>		Room No. <u>706B</u>	
Identification number <u>P348216</u>		Doctor <u>S. Vasquez</u>	
Request <u>CBC</u>		Date request received <u>6/12/71</u>	
Specimen <u>Blood</u>		Collection date <u>6/12/71</u> Time <u>7:45 A.M.</u>	
R E P O R T			

## INFORMATION SHEET

060-001-001 (Cont'd)

### SAMPLE LABORATORY REQUEST FORM

The important areas to be filled in on the request form are numbered from 1 through 8.

#### **Patient's Name**

①

The patient's name must be recorded, last name first with the first name following, then the middle initial. This information should be stamped, typed, printed, or legibly written.

#### **Identification Number**

②

The hospital-assigned number, or in some hospitals the Social Security number, is the patient's identification number. Although two patients may have the same name and even the same room number, the identification number will be different: a number is assigned to only one patient.

#### **Room Number**

③

The room number, which includes the ward or floor number, facilitates the arrival of test results as quickly as possible. In some hospitals certain wards or floors are reserved for specific illnesses. For example, one ward is used for dialysis patients only, another for cancer patients, and still another for infectious diseases, etc. Knowing the ward to which the patient is assigned often makes the technologist's work more interesting because he can sometimes correlate his test results with the patient's disease.

#### **Doctor's Name**

④

The inclusion of the physician's name is very important. On occasion the physician must be contacted for further information about the patient, or to report unusual findings. Such findings may cause the physician to request additional tests.

The physician's name is usually written with the initial of his first name followed by his last name. The initial will differentiate one physician from the other in the event there are two with the same last names.

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## INFORMATION SHEET

060-001-001 (Cont'd)

### Request

(5)

This space provides for the name of the test requested by the physician. For example, he may request a "blood culture," "serum potassium," "type and cross match," "complete blood count," or any of many laboratory tests or procedures. This information is very important to the laboratory worker because it indicates, in addition to the physician's orders, the laboratory section to which the specimen must be sent for processing.

In the sample laboratory form shown previously, the request is for a complete blood count(CBC).

### Specimen

(6)

In this space the type of specimen to be processed is noted, i.e., pus, blood, urine, etc. This, too, is an essential piece of information because test results vary depending upon the type of specimen tested.

### Date Request is Received

(7)

The date the request is received is often compared with the date and time the specimen was collected. This helps the physician to know whether there is a lapse of time between the receipt of the request and the time of collection.

Collection of the specimen should take place within an hour, if possible, after receipt of the request. However, there may be circumstances in which this is not possible or desired. The patient may be indisposed, eating, in X-ray, asleep, or physically unable to give a specimen, e.g., a stool specimen. At times, emergency or stat work on another patient will delay collection of a specimen. (In some laboratory facilities, EMERGENCY means immediately, while STAT means within three hours or as soon as possible.)

### Collection Date and Time

(8)

The date of collections must be recorded. Future follow-up tests may be required at specific intervals. Unless the date of collection is recorded, it is impossible to know when the next test must be performed.

Certain tests cannot be performed except on a freshly collected specimen. The date and time of collection would determine whether a specimen must be reordered or whether the test can be performed on the original specimen.

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## INFORMATION SHEET

060-001-001 (Cont'd)

The time of collection is also important because the same test may be ordered several times during one day. When the results are posted on the patient's chart, the collection time distinguishes the tests.

### SAMPLE SPECIMEN LABEL

The specimen label contains the patient information (as shown on lines 1 through 4, below) required to assure that the specimen and the request form refer to the same patient.

SAMPLE SPECIMEN LABEL		
Name	Evers, Clarence R.	①
Identif. No.	P348216	②
Room No.	706B	③
Doctor	S. Vasquez	④

### VERIFICATION OF PATIENT INFORMATION

When the request slip is filled out completely, the laboratory worker must compare the patient information on the request slip with the label attached to the clinical specimen. All information must be identical and any discrepancy is sufficient reason to obtain a new specimen.

This procedure is very simple, but so important that it needs to be emphasized. Serious consequences can and do occur because of improper verification of patient information. An undetected mix-up in which one patient's specimen is sent with another patient's request slip could lead to incorrect treatment and great anxiety, if not harm, to the patient.



## INFORMATION SHEET

060-001-001 (Cont'd)

### ADDITIONAL METHODS OF IDENTIFICATION

Many hospitals identify specimens by assigning a laboratory or department number to the request slip and the same number to the specimen. If, for example, number 10567 is placed on both the specimen (or specimen sample) and request slip, the request slip and the specimen need not be attached to one another. One need only look for the number to find the correct specimen and/or request slip. In this way, neither can get lost.

Program	Task	Page
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## JOB SHEET

060A-001-002

### "REVIEW LABELING CLINICAL SPECIMENS"

SELECT THE BEST ANSWER.

1. After specimens have been collected, it is necessary to complete the request slip and identify the clinical specimen with
  - A. a name.
  - B. a label.
  - C. a date.
  - D. a number.
2. Why could an erroneous diagnosis by the physician occur if required information is not placed on the label?
  - A. Two or more patients may have the same name.
  - B. A report may be recorded on the wrong patient's chart.
  - C. A different number is assigned to each patient.
  - D. Sections of the request slip and label are not completed.
3. On the request form, the patient's name must be recorded with the \_\_\_\_\_ name first with the \_\_\_\_\_ name following, then the middle initial.
  - A. last, first
  - B. first, last
  - C. nickname, first
  - D. married, first
4. The hospital-assigned number, or in some hospitals the Social Security number, is the \_\_\_\_\_ identification number.
  - A. specimen
  - B. patient's
  - C. admission
  - D. laboratory
5. What facilitates the arrival of test results as quickly as possible?
  - A. Patient's Name
  - B. Identification Number
  - C. Room Number
  - D. Collection Date

JOB SHEET (Cont'd)

6. What doctor's name is written correctly?
- A. Meyer, R.
  - B. Meyer, R., L.
  - C. R. L. Meyer
  - D. R. Meyer
7. Test results vary depending upon the type of specimen tested. A type of specimen to be processed is noted as
- A. CBC.
  - B. water.
  - C. emesis.
  - D. pus.
8. What helps the physician to know whether there is a lapse of time between the receipt of the request and the time of collection?
- A. Date of Collection
  - B. Date of Request
  - C. Date of Test
  - D. Time of Collection
9. Fill out the sample specimen label correctly with the following information
- Name: Susan L. Ryers  
I.D. No.: C628612  
Rm. No.: 210B  
Doctor: S. Bernhoft
10. If the information on the request slip is not identical with the information on the label, what needs to be done?
- A. New Test
  - B. New Request
  - C. New Specimen
  - D. New Information

# INTERMEDIATE OBJECTIVE #2

LABEL CLINICAL SPECIMENS.

## LEARNING STEPS (Activities)

1. Observe Resource #1 for a demonstration on how to label a clinical specimen correctly.
2. Complete Resource #2 for a review on labeling clinical specimens.
3. When mastery of this task has been accomplished, complete Resource #3 for a performance evaluation.
4. Complete Resource #4 for a written evaluation.
5. Proceed to Resource #5.

## RESOURCES

1. See instructor.
2. Job Sheet 060A-002-002, "Review Labeling Clinical Specimens," Pages 11-14, in this SLG.
3. Performance Checklist, Pages 15- in this SLG.  
  
See instructor for evaluation.
4. Written Criterion Examination, Task #060A, "Label Clinical Specimens," in the LRC.  
  
See LRC Secretary.
5. See instructor for Task 060B, "Distribute Clinical Specimens."

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## JOB SHEET

060A-002-002

### "REVIEW LABELING CLINICAL SPECIMENS"

#### EXERCISE 1: FILLING IN THE REQUEST FORM

##### DIRECTIONS:

Read Case Study 1 concerning a patient who has just entered the hospital. Using the information given, fill in the eight parts of the request slip below as previously indicated in the sample specimen label.

\* \* \* \* \*

##### Case Study 1

On January 23, 1973, Daniel P. Kranetz, at the request of Dr. Paul Antoni, was admitted to the hospital complaining of lower abdominal pain. He was given the identification number P372541 and placed in Room 406D. Dr. Antoni ordered a routine urinalysis to be done STAT. You collected the urine specimen from the patient at 3:25 p.m. on the date of admission.

\* \* \* \* \*

#### SAMPLE LABORATORY REQUEST FORM

Patient's Name \_\_\_\_\_ Room No. \_\_\_\_\_

Identification number \_\_\_\_\_ Doctor \_\_\_\_\_

Request \_\_\_\_\_ Date request received \_\_\_\_\_

Specimen \_\_\_\_\_ Collection date \_\_\_\_\_ Time \_\_\_\_\_

R  
E  
P  
O  
R  
T

(See sample for confirmation of your answers.)

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# JOB SHEET (Cont'd)

## SAMPLE LABORATORY REQUEST FORM

Patient's Name Kranetz, Daniel P. Room No. 406D

Identification number P372541 Doctor P. Antoni

Request routine urinalysis Date Request received 1/23/73

Specimen urine Collection date 1/23/73 Time 3:25 PM

R  
E  
P  
O  
R  
T

Check (✓) blank if you wrote the following:

- ☐ 1. Did you write the patient's name in the proper order: full last name, full first name (not Dan), middle initial?
- ☐ 2. Did you write the doctor's initial and then his last name?
- ☐ 3. Are all the numbers and letters in the room number and identification number exactly as given in Case Study 1?

If any part is not correct, reread the Introduction. If all parts are correct, proceed to the next page.

## JOB SHEET (Cont'd)

### EXERCISE 2: LABELING THE SPECIMEN

#### DIRECTIONS:

Using the same information given in Case Study 1, complete the sample specimen label below.

#### SAMPLE SPECIMEN LABEL

Name \_\_\_\_\_

Identif. No. \_\_\_\_\_

Room No. \_\_\_\_\_

Doctor \_\_\_\_\_

(See Sample for confirmation of your answers.)

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## JOB SHEET (Cont'd)

Check (✓) blank if you wrote the following:

- \_\_\_\_\_ 1. Are all sections completed in the same way as on the request form?
- \_\_\_\_\_ 2. Is the information on the label identical to that on the request form?

If either part is not correct, reread the Introduction, and make the necessary corrections. If both parts are correct, proceed to the Performance Test Directions on the following page.

### SAMPLE SPECIMEN LABEL

Name Kranetz, Daniel P.

Identif. No. P372541

Room No. 406D

Doctor P. Antoni

## PERFORMANCE/PRODUCT CHECKLIST

Program: MEDICAL ASSISTING

Task No: 060A

Student's Name: \_\_\_\_\_ Date Of Attempt: \_\_\_\_\_

Evaluator's Name: \_\_\_\_\_ Evaluation Site: \_\_\_\_\_

Performance Attempt: 1 2 3 4

### Terminal Performance Objective:

GIVEN LABORATORY SPECIMENS, NECESSARY TOOLS AND EQUIPMENT, AND LABORATORY FORMS, YOU WILL LABEL CLINICAL SPECIMENS.

### Directions To The Student:

Before attempting this task for mastery, carefully review this checklist. You will be evaluated on the basis of this checklist. When you feel you are ready for evaluation, contact your instructor. You must complete your performance within 10 minutes and must score at least 26 out of 26 points or 100 % for mastery. Critical items are marked with an asterisk (\*). These items must be satisfactorily completed.

### Directions To The Evaluator:

The student will contact you when ready for the evaluation. The student must complete the performance within 10 minutes and must score 26 out of 26 points or 100 % and all items marked with an asterisk (\*) must be satisfactorily completed.

Program	Task	Page
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## PERFORMANCE CHECKLIST

060A

1. Read a case study of a patient who is admitted to the hospital.
2. Accurately complete a request slip and a specimen label for this case study.
3. Discuss reasons for performing each step of this procedure.

### CASE STUDY:

On April 23, 1985, Jean Jonas, at the request of Dr. Ross Meyer, was admitted to the hospital complaining of lower right abdominal pain. She was given the identification number C672543 and placed in Room 602B. Dr. Meyer ordered a CBC to be done STAT. The laboratory technician collected the blood sample from the patient at 4:05 p.m. on the date of admission.

SAMPLE LABORATORY REQUEST FORM		
Patient's Name _____	Room No. _____	
Identification number _____	Doctor _____	
Request _____ Date Request Received _____		
Specimen _____	Collection Date _____	Time _____
Report		



# PERFORMANCE CHECKLIST

RATING

YES NO

1. Without error, the student completed the following items on the request slip:

a. Patient's name (last, first, and middle initial).

b. Room number.

c. Identification number.

d. Doctor's name (first initial and last name).

e. Request.

f. Date request received.

g. Specimen.

h. Collection date and time.

2. Without error, the student completed the following items on the specimen label:

a. Patient's name (last, first, and middle initial).

b. Room number.

c. Identification number.

d. Doctor's name (first initial and last name).

TOTAL POINTS EARNED =

POINTS NEEDED FOR MASTERY = 26

TOTAL POINTS POSSIBLE = 26

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PERFORMANCE TEST  
(Continued)

*Directions*

1. Read Case Study 2, which gives some information about a patient entering the hospital. The patient carries with him the doctor's orders, which include a laboratory request.
2. Complete the following figures.

\* \* \* \* \*

Case Study 2

On July 28, 1971, Alice M. Simons was admitted to the hospital by Dr. A. Johns, with a complaint of dizziness. The doctor requested a glucose test. Upon admission, the patient was issued the identification number L61504 and placed in Room 431C. You collect blood for the glucose test at 5:45 p.m. on the date of admission.

\* \* \* \* \*

SAMPLE LABORATORY REQUEST FORM

Patient's Name \_\_\_\_\_ Room No. \_\_\_\_\_

Identification number \_\_\_\_\_ Doctor \_\_\_\_\_

Request \_\_\_\_\_ Date request received \_\_\_\_\_

Specimen \_\_\_\_\_ Collection date \_\_\_\_\_ Time \_\_\_\_\_

R  
E  
P  
O  
R  
T

SAMPLE SPECIMEN LABEL

Name \_\_\_\_\_

Identif. No. \_\_\_\_\_

Room No. \_\_\_\_\_

Doctor \_\_\_\_\_

PROGRAM MEDICAL ASSISTING

CRITERION EXAM

TASK # 060A

DIRECTIONS:

THE PURPOSE OF THIS EXAM IS TO DETERMINE WHETHER OR NOT YOU HAVE UNDERSTOOD THE INFORMATION ON LABELING CLINICAL SPECIMENS.

Each of the questions or incomplete statements below is followed by several words, phrases, or a series of numbers. Choose the one which best answers the question or completes the statement correctly. Place the letter associated with that choice (A,B,C or D) in the numbered blank space on your ANSWER SHEET. DO NOT WRITE ON THIS TEST!!! To master this exam you must answer 9 out of 10 items correctly, 90 %.

Program	Task	Page
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## EVALUATION SHEET

### WRITTEN CRITERION EXAMINATION "LABEL CLINICAL SPECIMENS" TASK #060A

1. What facilitates the arrival of test results as quickly as possible?
  - A. Patient's Name
  - B. Identification Number
  - C. Room Number
  - D. Collection Date
2. If the information on the request slip is not identical with the information on the label, what needs to be done?
  - A. New Test
  - B. New Request
  - C. New Specimen
  - D. New Information
3. On the request form, the patient's name must be recorded with the \_\_\_\_\_ name first with the \_\_\_\_\_ name following, then the middle initial.
  - A. last, first
  - B. first, last
  - C. nickname, first
  - D. married, first
4. What helps the physician to know whether there is a lapse of time between the receipt of the request and the time of collection?
  - A. Date of Collection
  - B. Date of Request
  - C. Date of Test
  - D. Time of Collection
5. After specimens have been collected, it is necessary to complete the request slip and identify the clinical specimen with:
  - A. a name.
  - B. a label.
  - C. a date.
  - D. a number.
6. What doctor's name is written correctly?
  - A. Meyer, R.
  - B. Meyer, R., L.
  - C. R. L. Meyer
  - D. R. Meyer

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## EVALUATION SHEET (Cont'd)

7. The hospital-assigned number, or in some hospitals the Social Security number, is the \_\_\_\_\_ identification number.

- A. specimen
- B. patient's
- C. admission
- D. laboratory

8. Why could an erroneous diagnosis by the physician occur if required information is not placed on the label?

- A. Two or more patients may have the same name.
- B. A report may be recorded on the wrong patient's chart.
- C. A different number is assigned to each patient.
- D. Sections of the request slip and label are not completed.

9. Fill out the sample specimen label correctly with the following information:

Name: Susan L. Ryers  
I.D. No.: C628612  
Rm. No.: 210B  
Doctor: S. Bernhoft

10. Test results vary depending upon the type of specimen tested. A type of specimen to be processed is noted as:

- A. CBC.
- B. water.
- C. emesis.
- D. pus.

PROGRAM MEDICAL ASSISTING

CRITERION EXAM

TASK # 060A

DIRECTIONS:

THE PURPOSE OF THIS EXAM IS TO DETERMINE WHETHER OR NOT YOU HAVE UNDERSTOOD THE INFORMATION ON LABELING CLINICAL SPECIMENS.

Each of the questions or incomplete statements below is followed by several words, phrases, or a series of numbers. Choose the one which best answers the question or completes the statement correctly. Place the letter associated with that choice (A,B,C or D) in the numbered blank space on your ANSWER SHEET. DO NOT WRITE ON THIS TEST!!! To master this exam you must answer 9 out of 10 items correctly, 90 %.

Program	Task	Page
07,0904	060A	20

## EVALUATION SHEET

### WRITTEN CRITERION EXAMINATION "LABEL CLINICAL SPECIMENS" TASK #060A

1. What facilitates the arrival of test results as quickly as possible?
  - A. Patient's Name
  - B. Identification Number
  - C. Room Number
  - D. Collection Date
2. If the information on the request slip is not identical with the information on the label, what needs to be done?
  - A. New Test
  - B. New Request
  - C. New Specimen
  - D. New Information
3. On the request form, the patient's name must be recorded with the \_\_\_\_\_ name first with the \_\_\_\_\_ name following, then the middle initial.
  - A. last, first
  - B. first, last
  - C. nickname, first
  - D. married, first
4. What helps the physician to know whether there is a lapse of time between the receipt of the request and the time of collection?
  - A. Date of Collection
  - B. Date of Request
  - C. Date of Test
  - D. Time of Collection
5. After specimens have been collected, it is necessary to complete the request slip and identify the clinical specimen with:
  - A. a name.
  - B. a label.
  - C. a date.
  - D. a number.
6. What doctor's name is written correctly?
  - A. Meyer, R.
  - B. Meyer, R., L.
  - C. R. L. Meyer
  - D. R. Meyer

## EVALUATION SHEET (Cont'd)

7. The hospital-assigned number, or in some hospitals the Social Security number, is the \_\_\_\_\_ identification number.
- A. specimen
  - B. patient's
  - C. admission
  - D. laboratory
8. Why could an erroneous diagnosis by the physician occur if required information is not placed on the label?
- A. Two or more patients may have the same name.
  - B. A report may be recorded on the wrong patient's chart.
  - C. A different number is assigned to each patient.
  - D. Sections of the request slip and label are not completed.
9. Fill out the sample specimen label correctly with the following information:
- Name: Susan L. Ryers  
I.D. No.: C628612  
Rm. No.: 210B  
Doctor: S. Bernhoft
10. Test results vary depending upon the type of specimen tested. A type of specimen to be processed is noted as:
- A. CBC.
  - B. water.
  - C. emesis.
  - D. pus.

## APPENDIX VI

### Articulation Agreements





PROGRAM ARTICULATION AGREEMENT  
BETWEEN  
COLLEGE OF LAKE COUNTY and LAKE COUNTY AREA VOCATIONAL CENTER

The College of Lake County (CLC) and Lake County Area Vocational Center (LCAVC) do hereby enter into an agreement that provides for course credit in a variety of programs for Lake County Vocational Center Students who qualify under the terms and conditions agreed upon for such programs.

Course credits shall be granted by CLC toward a degree or certificate required for a specific program offered through CLC. No fees will be assessed to the student acquiring this credit through completion of an LCAVC program under the terms and conditions required for that program area. Students involved in proficiency testing will be responsible for fees in accordance with current CLC proficiency (challenge exam) policy.

This agreement shall be subject to annual review and modification through mutual agreement. When specific programs or course competencies are revised, it shall be the responsibility of the institution initiating the change to notify the other school representatives of such changes. Such modifications will not jeopardize students currently enrolled in programs covered under this agreement.

This agreement may be terminated during the summer session of any year by either the CLC Board of Trustees or the LCAVC Board of Control.

Both participating institutions may publish information regarding this agreement.

COLLEGE OF LAKE COUNTY, DIST. 532

LAKE COUNTY AREA VOCATIONAL CENTER

By: \_\_\_\_\_  
Chairperson, Board of Trustees

By: \_\_\_\_\_  
Chairperson, Board of Control

By: \_\_\_\_\_  
Secretary, Board of Trustees

By: \_\_\_\_\_  
Secretary, Board of Control

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# THEORY OF THE EARTH

CHAPTER I. OF THE ORIGIN AND GROWTH OF THE EARTH.

THE EARTH, as we see it, is a globe, or sphere, of a very great size, and is composed of a solid mass of matter, which is divided into several parts, or regions, called continents, islands, and seas.

The surface of the globe is not perfectly smooth, but is covered with mountains, hills, valleys, and rivers, which are the result of the action of various causes, and which give it its present appearance.

The interior of the globe is also not uniform, but is divided into several layers, or strata, which are composed of different materials, and which are separated from each other by distinct boundaries.

The study of the earth, and of its various parts, is called Geography, and is a branch of natural philosophy, which is the science of the properties and causes of the material world.

The theory of the earth, or of its origin and growth, is a branch of natural philosophy, which is the science of the properties and causes of the material world.

The study of the earth, and of its various parts, is called Geography, and is a branch of natural philosophy, which is the science of the properties and causes of the material world.

COLLEGE OF LAKE COUNTY and LAKE COUNTY AREA VOCATIONAL CENTER  
PROGRAM ARTICULATION AGREEMENT  
TERMS AND CONDITIONS FOR THE INDUSTRIAL MACHINE TOOL TRADES PROGRAM  
(CERTIFICATE AND A.A.S. DEGREE)

LCAVC students may receive credit for Machine Shop I (ISM 111) and/or Machine Shop II (ISM 112) as per the criteria identified in Category I or Category II as listed below. Up to six (6) credit hours may be earned toward a Certificate Degree in Industrial Machine Tool Trades offered at the College of Lake County.

CATEGORY I  
(Requirements for ISM 111)

Completion of the competencies as defined as the course objectives of ISM 111 offered at the College of Lake County, will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of 1 year enrollment in LCAVC Machine Shop Program with an average letter grade of "B" or higher.
- and
- B. Successful achievement of those competencies, criteria, and standards, hereto attached, as identified as being in parallel with course objectives of ISM 111, CLC.

CATEGORY II  
(Requirements for ISM 112)

Completion of the competencies as defined as the course objectives of ISM 112 offered at the College of Lake County, will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of 2 year enrollment in LCAVC Machine Shop Program with an average letter grade of "B" or higher.
- and
- B. Successful achievement of those competencies, criteria, and standards, hereto attached, and recognized as being in parallel with course objectives of ISM 112, CLC.

Any LCAVC Machine Shop Program student who has successfully met either of the requirements (Category I or II) listed above will receive the appropriate CLC credit for Machine Shop I (ISM 111) and/or Machine Shop II (ISM 112).

Proficiency exams will be made available through the College of Lake County for those students who do not meet the full criteria identified in either of the above listed Categories I or II above. (Note: a nominal, non-refundable fee is assessed for the administration of proficiency examinations.)

WITNESS WHEREOF:

FOR THE  
COLLEGE OF LAKE COUNTY,  
DIST. 532

FOR THE  
LAKE COUNTY AREA VOCATIONAL  
CENTER

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Program Coordinator

By: \_\_\_\_\_  
Machine Shop Instructor

By: \_\_\_\_\_  
Division Chairman

By: \_\_\_\_\_  
Assistant Director

THE UNIVERSITY OF CHICAGO  
DIVISION OF THE PHYSICAL SCIENCES  
DEPARTMENT OF CHEMISTRY

RESEARCH REPORT  
NO. 1000

THE  
STRUCTURE  
OF  
THE  
ATMOSPHERE

BY  
J. G. KIRK  
AND  
J. R. MILES

DEPARTMENT OF CHEMISTRY  
UNIVERSITY OF CHICAGO  
CHICAGO, ILLINOIS

Presented to the  
Academy of Sciences  
of the  
National Research Council  
of the  
National Academy of Sciences  
of the  
United States of America  
at  
Washington, D. C.  
on  
January 10, 1950



COLLEGE OF LAKE COUNTY and LAKE COUNTY AREA VOCATIONAL CENTER  
PROGRAM ARTICULATION AGREEMENT  
TERMS AND CONDITIONS FOR THE INDUSTRIAL REFRIGERATION AND AIR CONDITIONING PROGRAM  
(CERTIFICATE AND A.A.S. DEGREE)

LCAVC students may receive credit for Theory of Refrigeration (RAC 110) and/or Applied Electricity (RAC 174) as per the criteria identified in Category I or Category II as listed below. Up to nine (9) credit hours may be earned toward a Certificate Degree in Industrial Refrigeration and Air Conditioning offered at the College of Lake County.

CATEGORY I  
(Requirements for RAC 110)

Completion of the competencies as defined as the course objectives of RAC 110 offered at the College of Lake County, will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of 1 year enrollment in LCAVC Air Conditioning/Heating/Refrigeration Program with an average letter grade of "B" or higher.

and

- B. Successful achievement of those competencies, criteria, and standards, hereto attached, as identified as being in parallel with course objectives of RAC 110, CLC.

CATEGORY II  
(Requirements for RAC 174)

Completion of the competencies as defined as the course objectives of RAC 174 offered at the College of Lake County, will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of 2 year enrollment in LCAVC Air Conditioning/Heating/Refrigeration Program with an average letter grade of "B" or higher.

and

- B. Successful achievement of those competencies, criteria, and standards, hereto attached, and recognized as being in parallel with course objectives of RAC 174, CLC.

Any LCAVC Air Conditioning/Heating/Refrigeration Program student who has successfully met either of the requirements (Category I or II) listed above will receive the appropriate CLC credit for Theory of Refrigeration (RAC 110) and/or Applied Electricity (RAC 174).

Proficiency exams will be made available through the College of Lake County for those students who do not meet the full criteria identified in either of the above listed Categories I or II above. (Note: a nominal, non-refundable fee is assessed for the administration of proficiency examinations.)

WITNESS WHEREOF:

FOR THE  
COLLEGE OF LAKE COUNTY,  
DIST. 532

FOR THE  
LAKE COUNTY AREA VOCATIONAL  
CENTER

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Program Coordinator

By: \_\_\_\_\_  
AC/Htg/Refrig Instructor

By: \_\_\_\_\_  
Division Chairman

By: \_\_\_\_\_  
Assistant Director



COLLEGE OF LAKE COUNTY AND LAKE COUNTY AREA VOCATIONAL CENTER  
PROGRAM ARTICULATION AGREEMENT  
TERMS AND CONDITIONS FOR THE INDUSTRIAL WELDING PROGRAM  
(CERTIFICATE AND A.A.S. DEGREE)

LCAVC students may receive credit for General Welding (WLD 110), or Oxy-Acetylene Welding and Cutting (WLD 111), and/or Arc Welding I (WLD 112) as per the criteria identified in Category I or Category II as listed below. Up to eight (8) credit hours may be earned toward a Certificate Degree in Industrial Welding offered at the College of Lake County.

CATEGORY I  
(Requirements for WLD 110)

Completion of the competencies as defined as the course objectives of WLD 110 offered at the College of Lake County, will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of 1 year enrollment in LCAVC Welding Program with an average letter grade of "B" or higher.
- and
- B. Successful achievement of those competencies, criteria, and standards, hereto attached, as identified as being in parallel with course objectives of WLD 110, CLC.

CATEGORY II  
(Requirements for WLD 111 and WLD 112)

Completion of the competencies as defined as the course objectives of WLD 111 and WLD 112 offered at the College of Lake County, will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of 2 year enrollment in LCAVC Welding Program with an average letter grade of "B" or higher.
- and
- B. Successful achievement of those competencies, criteria, and standards, hereto attached, and recognized as being in parallel with course objectives of WLD 111 and/or WLD 112, CLC.

Any LCAVC Welding Program student who has successfully met either of the requirements (Category I or II) listed above will receive the appropriate CLC credit for General Welding (WLD 110) or Oxy-Acetylene Welding and Cutting (WLD 111), and/or Arc Welding I (WLD 112).

Proficiency exams will be made available through College of Lake County for those students who do not meet the full criteria identified in either of the above listed Categories I or II above. (Note: a nominal, non-refundable fee is assessed for the administration of proficiency examinations.)

WITNESS WHEREOF:

FOR THE  
COLLEGE OF LAKE COUNTY,  
DIST. 532

FOR THE  
LAKE COUNTY AREA VOCATIONAL  
CENTER

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Program Coordinator

By: \_\_\_\_\_  
Welding Instructor

By: \_\_\_\_\_  
Division Chairman

By: \_\_\_\_\_  
Assistant Director



COLLEGE OF LAKE COUNTY AND LAKE COUNTY AREA VOCATIONAL CENTER

PROGRAM ARTICULATION AGREEMENT

TERMS AND CONDITIONS FOR THE OFFICE SYSTEMS AND TECHNOLOGY

(CERTIFICATE AND A.A.S. DEGREE)

LCAVC students may receive credit for Word Processing Equipment (BSS 114), and/or Word Processing Equipment Applications (BSS 115), and/or Machine Transcription (BSS 117), and/or Records Management (BSS 119), and/or Intermediate Typing (BSS 128), and/or Proofreading (BSS 172), and/or Beginning Electronic Printing Calculator (BSS 173), and/or Advanced Electronic Calculator (BSS 174), and/or Business Computer Applications (DPR 175), as per the criteria identified in Category I or Category II as listed below. Up to fourteen (14) credit hours may be earned toward a Certificate Degree in Office Systems and Technology offered at the College of Lake County.

Application for advanced standing in any of the courses identified above must be made within three (3) years of Area Vocational Center program completion.

CATEGORY I

(Requirements for BSS 114 (maximum credit 1 hour), 115 (maximum credit 1 hour), 117, 119, 128, 172, 173, 174)

Completion of the competencies as defined as course objectives, BSS 114, 115, 117, 119, 128, 172, 173, 174, offered at the College of Lake County will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of one year enrollment in LCAVC Secretarial Office Occupations with an average letter grade of "B" or higher.

and

- B. Successful achievement of those competencies, criteria, and standards, hereto attached as identified as being in parallel with the College of Lake County course objectives for BSS 114, 115, 117, 119, 128, 172, 173, and 174.



THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
RESEARCH REPORT  
1961

1. The first part of the report describes the synthesis of a new class of compounds, which are characterized by their unique properties. The synthesis was carried out under conditions of high purity and the resulting compounds were found to be stable and soluble in a wide range of solvents.

2. The second part of the report describes the physical and chemical properties of these compounds. The compounds were found to have a melting point of approximately 150°C and a boiling point of approximately 250°C. They were also found to be stable in air and to be soluble in a wide range of solvents.

3. The third part of the report describes the results of a series of experiments which were carried out to determine the effect of these compounds on the growth of certain types of bacteria. The results of these experiments showed that the compounds had a significant inhibitory effect on the growth of these bacteria, and that this effect was dependent on the concentration of the compounds.

CATEGORY II  
(Requirements for DPR 175)

Completion of the competencies as defined as the course objectives of DPR 175 offered at the College of Lake County will take place through the Lake County Area Vocational Center as evidenced by:

- A. Completion of two year enrollment in LCAVC Secretarial Office Occupations Program with an average letter grade of "B" or higher.

and

- B. Successful achievement of those competencies, criteria, and standards, hereto attached, and recognized as being in parallel with the College of Lake County course objectives for DPR 175.

Any LCAVC Secretarial Office Occupations student who has successfully met either of the requirements (Category I or II) listed above will receive the appropriate CLC credit for the Office Systems and Technology Program.

Proficiency exams will be made available through the College of Lake County for those students who do not meet the full criteria identified in either of the above listed Categories I or II above. (Note: a nominal, non-refundable fee is assessed for the administration of proficiency examinations.)

WITNESS WHEREOF:

FOR THE  
COLLEGE OF LAKE COUNTY,  
DIST.: 532

FOR THE  
LAKE COUNTY AREA VOCATIONAL  
CENTER

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Office Systems & Technology  
Program Coordinator

By: \_\_\_\_\_  
Secretarial Office Occupations  
Instructor

By: \_\_\_\_\_  
Associate Dean  
Business Division

By: \_\_\_\_\_  
Assistant Director



- Become familiar with the components of the system
- Interpret data on the screen
- Identify and define special function keys
- Perform basic printing operations
  - Modify format using print document menu
  - Adjust margins to print text in a format acceptable to business
  - Print document index of disk
  - Hot print text
- Manage files
  - Format a diskette
  - Create and name a new document
  - Delete a document
  - Rename a document
  - Display directory on screen
  - Make a duplicate copy of diskette
- Format text
  - Change primary format line
  - Create an alternate format line
  - Use tab and indent keys
  - Center text
  - Use a required space
  - Use underscore, double underscore, and autounderscore
  - Go to a work page
  - Use operator notes
- Edit text
  - Insert and delete text of varying length
  - Insert a page break and a required page break
  - Search and replace
  - Paginate and repaginate
  - Change vertical and horizontal spacing within document
- Copy and move text

(Maximum credit allowed is one (1) credit hour in 114.)





BSS 114 WORD PROCESSING EQUIPMENT - ABDICK (1 Credit Hour)

- Become familiar with the components of the system
- Interpret data on the screen
- Create files
  - Create a new file
  - Create a new page
- Type and record data
  - Set and clear margins and tabs
- Correct errors
  - Correct an error in the line you are typing
  - Remove an extra character, insert a missing character, and/or missing material, insert a blank line
  - Restore a page
- Perform basic printing operations
  - Output text to printer
  - Print text
  - Cancel a print request
  - Abort printing
  - Restart printing
- Reformat data
  - Delete material, move material, close-up material
  - Use text string
  - Change the set up of a page--name, pitch, size, linespace, wordspace, hyphen--and what each means and does
  - Adjust line endings
  - Center a line
  - Save and recall to move text
  - Change single spaced text to double; change double to single
  - Increase and decrease margins on a page of recorded text
- Use indents
  - Use temporary margins
  - Use block indents
  - Use hanging indents
  - Number indents
  - Revise indented material
- Highlight, dehighlight, underscore, deunderscore,
- Keyboard multi-page documents
  - Create headers and footers outside margins
  - Print page numbers automatically
  - Repaginate a document

(Maximum credit allowed is one (1) credit hour in 114.)



BSS 115 WORD PROCESSING EQUIPMENT APPLICATIONS - WANG (1 Credit Hour)

- Perform advanced formatting including strike thru, headers, footers, and decimal tab
- Perform advanced printing including stopping the printer to change print wheels and printing proportionally spaced text
- Print documents using dual column feature
- Merge two documents
- Sort data
- Generate a table of contents
- Use calculator feature
- Modify format lines globally
- Assemble documents from stored paragraphs
- Verify data for correct spelling

(Maximum credit allowed is one (1) credit hour in 115.)



BSS 115 WORD PROCESSING EQUIPMENT APPLICATIONS - AB DICK (1 Credit Hour)

- Manage files
- Keyboard statistical data
- Keyboard and revise columns
- Search and replace
- Create forms
- Use alternate type styles
- Manage printing
- Merge
- Select and sort
- Assemble documents
- Use variable line spacing

(Maximum credit allowed is one (1) credit hour in 115.)





## IMPROVE ENGLISH GRAMMAR SKILLS

- Use end marks correctly
- Use commas where needed
- Use colons, semicolons, dashes, hyphens, etc. where needed
- Capitalize words according to accepted standards
- Express numbers in a format acceptable to business
- Form the plural and/or possessive of nouns
- Use homonyms correctly
- Evaluate subject and verb agreement
- Check for grammar and consistency in sentences and paragraphs

## PROOFREAD BUSINESS DOCUMENTS

- Locate errors in typed copy
- Locate errors in handwritten copy
- Use proofreader's marks
- Make a corrected copy from draft
- Make revisions from dictated tape

## TRANSCRIBE BUSINESS DOCUMENTS

- Operate dictating/transcribing unit
- Transcribe from recorded dictation
- Edit dictated material into mailable form



- Learn how to establish or maintain an alphabetic, numeric, geographic, and subject filing system
- Code, index, and sort business papers
- Establish a cross-reference listing
- Retrieve materials from the files
- Locate misfiles
- Establish and use a charge-out system
- Develop procedures for transferring materials
- Use filing supplies and equipment safely and correctly
- Operate microfilming equipment





FORMAT BUSINESS DOCUMENTS

- Interoffice memorandum
- Business letters
- Minutes and reports of meetings
- Cards
- Labels
- Business reports
- Outlines
- Agendas
- Itineraries
- Preprinted forms (fill in)
- Financial and tabulated reports
- News releases
- Employment documents

IMPROVE TYPING SPEED AND ACCURACY

- Improve typing or keyboarding techniques
- Review finger positions (when needed)
- Improve both typing or keyboarding speed and accuracy
- Type a minimum of 45 words per minute with 5 errors or less for 5 minutes on 3 separate timings

# THE HISTORY OF THE UNITED STATES

OF THE  
NORTH AMERICAN CONTINENT  
FROM THE FIRST DISCOVERY  
TO THE PRESENT TIME

BY  
JOHN ADAMS  
OF THE MASSACHUSETTS

IN TWO VOLUMES.  
THE FIRST VOLUME.  
CONTAINING THE HISTORY  
FROM THE FIRST DISCOVERY  
TO THE YEAR 1776.

THE SECOND VOLUME.  
CONTAINING THE HISTORY  
FROM THE YEAR 1776  
TO THE PRESENT TIME.

NEW-YORK:  
PRINTED BY  
J. B. ALLEN,  
AT THE SIGN OF THE ANCHOR,  
IN NASSAU ST. NEAR  
THE CITY-HALL.

1800.

THE HISTORY OF THE UNITED STATES  
OF AMERICA

BY  
JOHN ADAMS  
OF THE MASSACHUSETTS

## USE REFERENCE MATERIALS

- Identify commonly available reference sources
- Locate materials in these sources

## IMPROVE ENGLISH GRAMMAR SKILLS

- Use end marks correctly
- Use commas where needed
- Use colons, semicolons, dashes, hyphens, etc. where needed
- Capitalize words according to accepted standards
- Express numbers in a format acceptable to business
- Form the plural and/or possessive of nouns
- Use homonyms correctly
- Evaluate subject and verb agreement
- Check for grammar and consistency in sentences and paragraphs

## PROOFREAD BUSINESS DOCUMENTS

- Locate errors in typed copy
- Locate errors in handwritten copy
- Use proofreader's marks
- Make a corrected copy from draft
- Make revisions from dictated tape

## IDENTIFY CORRECT DOCUMENT FORMAT

- Identify correct format for reports.
- Identify correct format for memos
- Identify correct format for business letters



BSS 173

BEGINNING ELECTRONIC PRINTING CALCULATOR

(1 Credit Hour)

Perform basic operations such as

- Addition
- Subtraction
- Multiplication
- Division
- Convert fractions to decimals
- Calculate percentages
- Average data





BSS 174

ADVANCED ELECTRONIC CALCULATOR

(1 Credit Hour)

- Calculate discounts and commissions
- Prepare invoices
- Determine mark up, mark down, gross profit, and net profit
- Compute percentage of increase, decrease and distribution
- Prorate income and expenses
- Compute earned and unearned interest
- Calculate simple and compound interest
- Compute payroll
- Prepare a bank reconciliation



**-RECOGNIZE BASIC MICROCOMPUTER CONCEPTS**

- Identify uses of computers in business and industry
- Recognize trends in the evolution and development of computers
- List and define components of the computer
- Differentiate between types of computer languages
- Keyboard a short program in basic
- Use DOS commands to format disk, backup a disk, delete files, etc.

**-FOLLOW BASIC ACCOUNTING PROCEDURES**

- Determine the uses of accounting in the office
- Analyze transactions to determine whether to debit or credit
- Record entries in a journal
- Post entries to accounts
- Prepare a balance sheet, trial balance, and income statement
- Make closing entries

**USE DATABASE MANAGEMENT SYSTEMS**

- Identify and define general database concepts and terminology
- Load the database system disk and format the data disk
- Create a database, define, and enter the database structure
- Enter and edit database using the defined screen format
- Select information for a database for displaying or printing
- Insert, modify, and delete database records
- Design, define, and print a report
- Define the report specification involving arithmetic and logical operations
- Sort and/or index the database and print a report
- Identify and complete disk management procedures
- Rename fields and modify the structure of a database

ORIGINAL ARTICLES

THE EFFECT OF VITAMIN C ON THE  
HEALTH OF MAN  
J. H. HENRIKSEN, M.D., and  
J. H. HENRIKSEN, JR., M.D.  
From the Department of Medicine,  
University of Wisconsin, Madison, Wis.

CLINICAL OBSERVATIONS

THE EFFECT OF VITAMIN C ON THE  
HEALTH OF MAN  
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THE EFFECT OF VITAMIN C ON THE  
HEALTH OF MAN  
J. H. HENRIKSEN, M.D., and  
J. H. HENRIKSEN, JR., M.D.  
From the Department of Medicine,  
University of Wisconsin, Madison, Wis.



## DESIGN AND USE SPREADSHEETS

- Identify the uses and advantages of electronic spreadsheets
- Load spreadsheet applications software
- Identify the basic components of spreadsheets and operate special function keys
- Enter data on an existing spreadsheet
- Print a spreadsheet
- Design, enter, and save data on a spreadsheet
- Recall, edit, and print a spreadsheet
- Design a spreadsheet containing formulas
- Use window and title options on a spreadsheet
- Build a supporting spreadsheet

## DISPLAY GRAPHS ON A COMPUTER

- Define computer graphics
- Identify computer graphics output devices
- Load graphics software, recall a graphics file, and print a graph
- Design and produce simple line, bar, and pie graphs
- Design and produce complex line, bar, and pie graphs
- Design and produce stacked bar graphs

## IDENTIFY TELECOMMUNICATIONS DELIVERY METHODS AND OPERATE TELECOMMUNICATIONS EQUIPMENT

- Define and identify the major delivery methods of telecommunications
- Explore telephone systems
- Describe computer networks
- Use electronic mail services
- Use teleconferencing systems and services

## OPERATE WORD/INFORMATION PROCESSING EQUIPMENT

- Become familiar with the components of the system
- Interpret data on the screen
- Identify and define special function keys
- Perform basic printing operations
- Manage files
- Format text
- Edit text
- Copy and move text
- Merge data

CHAPTER 10

The first part of the chapter discusses the importance of the...  
The second part of the chapter discusses the importance of the...  
The third part of the chapter discusses the importance of the...

CHAPTER 11

The first part of the chapter discusses the importance of the...  
The second part of the chapter discusses the importance of the...  
The third part of the chapter discusses the importance of the...

The first part of the chapter discusses the importance of the...  
The second part of the chapter discusses the importance of the...  
The third part of the chapter discusses the importance of the...

CHAPTER 12

The first part of the chapter discusses the importance of the...  
The second part of the chapter discusses the importance of the...  
The third part of the chapter discusses the importance of the...

## USE INTEGRATED SOFTWARE

- Identify integrated software concepts and terms
- Complete the procedures for loading an integrated software package and select options from the menu
- Create and add information to a database file
- Design a spreadsheet and enter data
- Create a graphics presentation from existing data
- Create a final report by integrating information

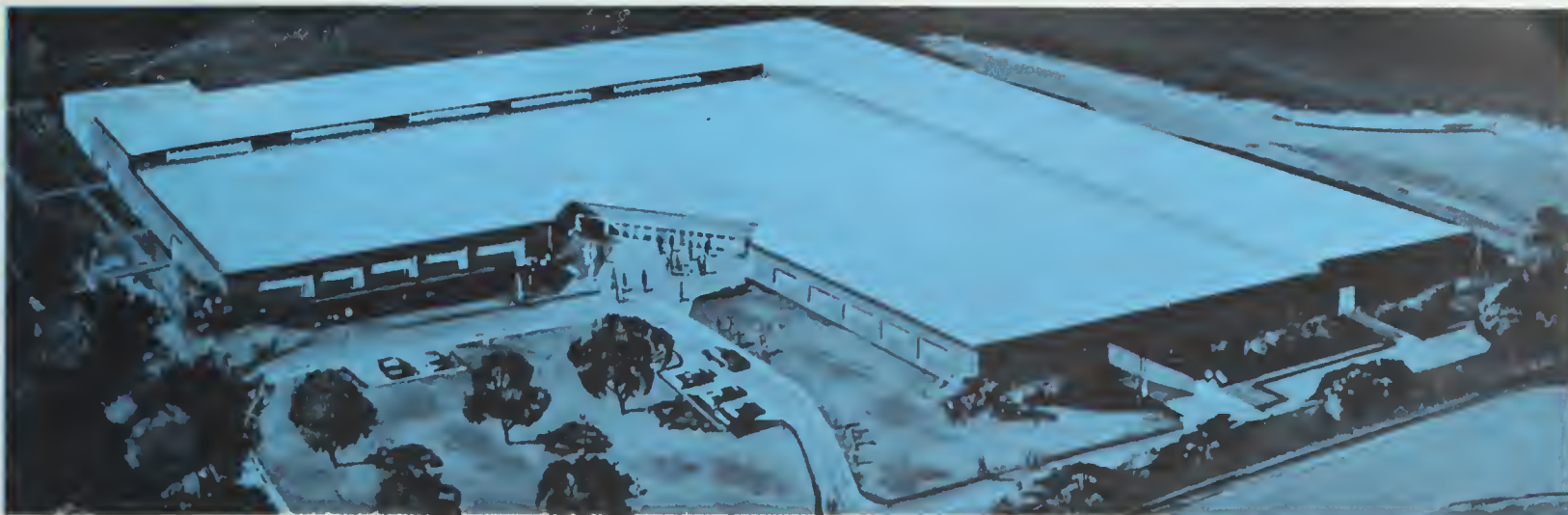


## APPENDIX VII

Principles of Technology Brochure







Lake County Area Vocational Center, 19525 West Washington Street, Grayslake, Illinois 60030

## PRINCIPLES OF TECHNOLOGY

### Program Description

Principles of Technology is a science program for 10th and 11th grade students interested in pursuing technical careers and extending their understanding of the physical principles underlying modern technology. Seven basic principles (Force, Work, Rate, Resistance, Energy, Power and Force Transformers) will be studied through hands-on activities, demonstrations, lab experiments and video presentations. Test equipment and technical devices used in lab experiments will help the students understand physical principles and their application to mechanical, fluid, electrical and thermal systems. Math instruction needed to understand and apply technology concepts will be offered. Program completers will earn science credit.

**Length of Program:** 1 semester - 187 hours  
Offered both 1st & 2nd semesters  
1 1/4 units science credit

### Program Need

Principles of Technology is a course designed to prepare students more effectively for technical careers. The complexity and rapid change of modern technology require training that is applicable to more than a single job. Technicians must understand the mechanical, fluid, electrical and thermal principles on which modern equipment operates. If technicians understand the principles on which their current work is based, they can apply those principles to new tasks as the need arises.

### Helpful High School Courses

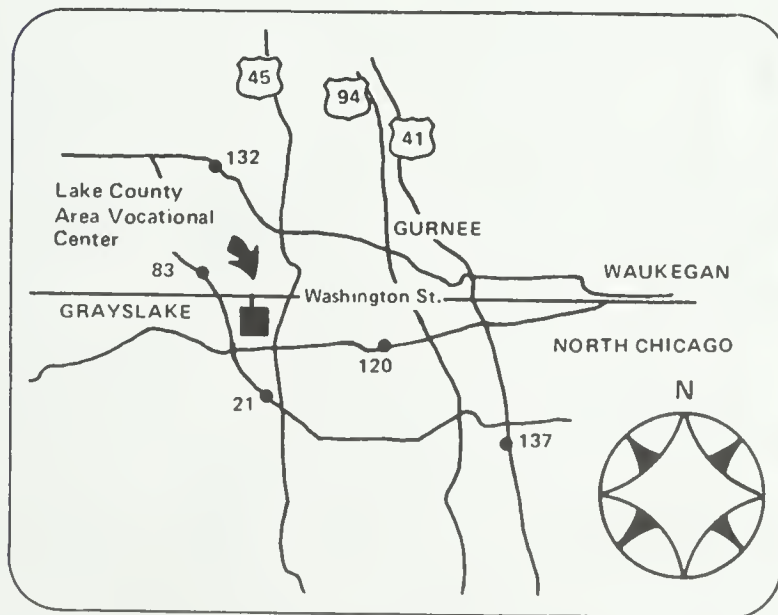
Shop Math  
Algebra I  
Metals  
Electricity  
Electronics

### Personal Qualities

Ability to think analytically  
Manual dexterity  
Good mechanical comprehension  
Interest in science and new technology  
Investigative, imaginary and technical mind

### Career Opportunities

The main objective of this basic program is to prepare students for entrance into technology or pre-engineering secondary/post secondary programs, and eventually into a technical career.



# Principles of Technology

Nonprofit Organization

U.S. POSTAGE

PAID

Grayslake, Illinois

Permit No. 80



Lake County Area Vocational Center, 19525 West Washington Street, Grayslake, Illinois 60030



## Purpose

To cooperatively provide occupational educational opportunities primarily for the Juniors and Seniors of the participating school districts who wish to gain employability in one of a wide range of occupational areas.

## Structure

The Lake County Area Vocational Center program and facility serves junior and senior students from the participating high school districts in Lake County, Illinois. Students attend the Center 2 hours and 5 minutes per day. The participating schools bus students to and from the Center. A Board of Control composed of superintendents from cooperating high schools sets policy and governs operation.

## Instructional System

The traditional vocational concept of Learning by Doing is the underlying method of instructional experiences at the Vocational Center. Emphasis is placed on student participating in actual, or simulated job and production situations. The Lake County Area Vocational Center plan incorporates student contracts, standards of competency and task-oriented learning.

## Enrollment

Enrollment is on an elective basis (Juniors and seniors) from each local high school. There are approximately 900 student learning stations available during a single shift. Programs are offered during a 3-shift basis per day, thus allowing flexibility in student scheduling. Each shift is 2 hours and 5 minutes in duration. The present 11th-12th grade enrollment base for the participating districts is 12,000 students. All LCAVC Programs are open to both male and female students.

## Facilities

The vocational center facility was designed and constructed with the various vocational programs in mind. Labor market, employment trends, student interest and local employer surveys were conducted and helped determine vocational center design and facility.

Lake County Area Vocational Center utilizes the latest in training equipment available. Students learn on the same type of equipment used in business and industry.

## APPENDIX VIII

### Staff Development Activities







Lake County Area Vocational Center  
PROJECT SITE SUMMARY

FY86 Site Budget  
Actual Expenditures  
Encumbered Expenses

\$5,000.00  
~~\$4,889.91~~  
~~\$489.89~~

5,000.00  
4,999.91  
-0-

Actual  
Actual

Working Balance

(\$308.91)

.09

ACTUAL EXPENDITURES

Entry Date	AppNr	Participant	Study Topic	Location	Date of Study	Travel Costs	Substitute Teacher	Registration Fees	Total
10/1	15	STANCZAK, Margaret Lake Co AVC-	Nurse Ass't Update	Joliet, IL	9/24/85	\$35.00			\$35.00
10/21	15	STANCZAK, Margaret Lake Co AVC-	Nurse Ass't Update	Joliet, IL	9/24/85		\$40.00		\$40.00
10/29	27	STANCZAK, Margaret	Death/Dying Seminar	Palatine, IL	10/4/85	\$15.20	\$40.00		\$40.00
11/5	27	STANCZAK, Margaret	Death/Dying Seminar	Palatine, IL	10/4/85	\$96.70			\$15.20
	16	KRATZ, Terry	Cosmetology Seminar	Springfield, IL	10/12-10/14/85	\$96.70	\$0.00	\$70.00	\$166.70
	17	OLSEN, Judy	Cosmetology Seminar	Springfield, IL	10/12-10/14/85	\$96.70		\$70.00	\$166.70
	18	PETERSEN, Patricia	Cosmetology Seminar	Springfield, IL	10/12-10/14/85	\$96.70		\$70.00	\$166.70
11/13	19	RUNDQUIST, Barbara Lake Co AVC-	Cosmetology Seminar	Springfield, IL	10/12-10/14/85	\$198.58		\$70.00	\$268.58
11/22	27	STANCZAK, Margaret	Death & Dying	Palatine, IL	10/4/85			\$40.00	\$0.00
	40	SANDS, James	IBEA	Springfield, IL	11/14-11/16/85	\$200.84			\$40.00
	40	Lake Co AVC-	IBEA	Springfield, IL	11/14-11/16/85		\$80.00	\$30.00	\$200.84
11/26	39	SANDS, James	Home Ec Teacher W/sh	Chicago, IL	11/14-11/15/85	\$105.47			\$0.00
	38	BRUMM, Dawn	OEA Fall Leadership	Rosemont, IL	11/15-11/16/85	\$60.30			\$110.00
	37	ROBINSON, Jan Lake Co AVC-	OEA Fall Leadership	Rosemont, IL	11/15-11/16/85	\$61.10			\$105.47
12/2	37	ROBINSON, Jan	OEA Fall Leadership	Rosemont, IL	11/15/85		\$40.00		\$60.30
	39	BRUMM, Dawn	Technical Assistance	Chicago, IL	11/14-11/15/85		\$80.00		\$61.10
2/6	70	RUESCH, Don	Emco Maier	Columbus, Ohio	1/25-1/28/86	<del>\$245.60</del> \$344.60			\$0.00
2/20	93	Lake Co AVC-	Information Proc	DeKalb, IL	2/5-2/6/86		\$80.00		\$40.00
	94	MEYER, Rose	Information Proc	DeKalb, IL	2/5-2/6/86		\$80.00		\$80.00
	91	SNIDER, Raymond	Information Proc	DeKalb, IL	2/5-2/6/86		\$80.00		\$80.00
	92	ROBINSON, Jan	Information Proc	DeKalb, IL	2/5-2/6/86		\$80.00		\$80.00
	95	KOLTON, William	Information Proc	DeKalb, IL	2/5-2/6/86		\$40.00		\$80.00
3/10	70	RUESCH, Don	Emco Maier Corp.	Columbus, Ohio	1/27-1/28/86		\$60.00		\$40.00
3/11	96	FIELDING, Joanne Lake Co AVC-	CAEYC Conference	Chicago, IL	2/21/86	\$13.20		\$24.00	\$60.00
	96	FIELDING, Joanne	CAEYC Conference	Chicago, IL	2/21/86		\$40.00		\$37.20
3/17	85	STANCZAK, Margaret Lake Co AVC-	IL Dept Health	Springfield, IL	2/23-2/28/86	\$356.14			\$0.00
3/17									\$40.00
									\$356.14
									\$0.00

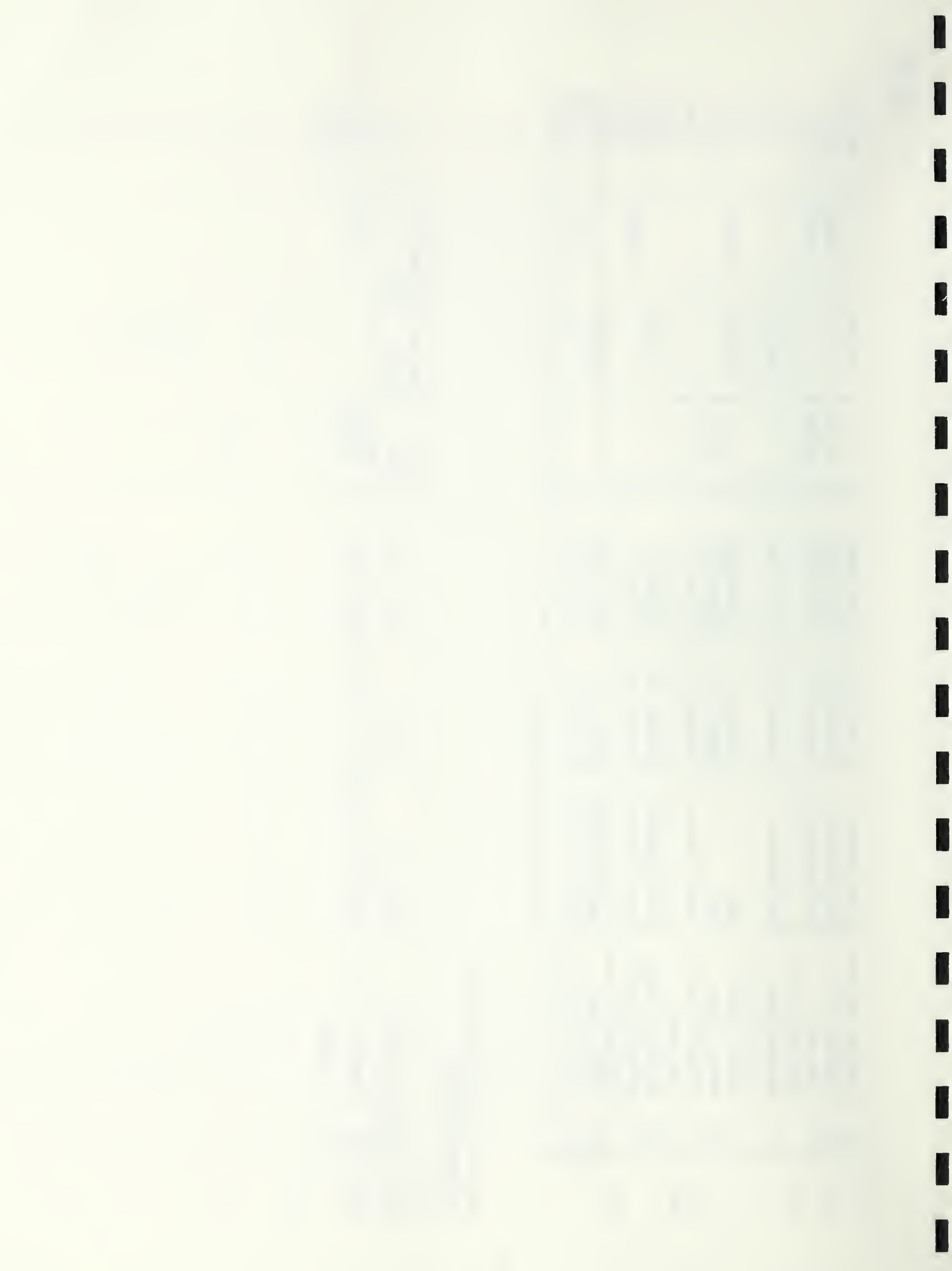
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4/18	85	STANCZAK, Margaret	IL Dept Health	Springfield, IL	2/24-2/28/86			\$90.00		\$90.00
	90	ROBINSON, Jan	OEA Conference	Rosemont, IL	3/20-3/22/86		\$111.60	\$30.00		\$141.60
	89	KISS, Sue	OEA Conference	Rosemont, IL	3/20-3/22/86		\$111.60	\$30.00		\$141.60
4/28	90	Lake County AVC-ROBINSON, Jan	OEA Conference	Rosemont, IL	3/20-3/21/86			\$80.00		\$80.00
	117	Lake County AVC-RANDLE, Connie	ITVA	Dallas, TX	4/16-4/18/86			\$120.00		\$0.00
	117	RANDLE, Connie	ITVA	Dallas, TX	4/16-4/19/86		\$219.30	\$375.00		\$495.00
5/12	110	HOLLANDER, Martin	Dynamic Graphics	Chicago, IL	5/5-5/6/86		\$25.88			\$25.88
5/14	110	Lake Co AVC-HOLLANDER, Martin	Dynamic Graphics	Chicago, IL	5/5-5/6/86			\$80.00		\$0.00
	110	HOLLANDER, Martin	Dynamic Graphics	Chicago, IL	5/5-5/6/86			\$365.00		\$80.00
5/23	117	Lake Co AVC-RANDLE, Connie	Intern'l TV Assoc	Dallas, TX	4/16-4/18/86			\$120.00		\$365.00
	117	RANDLE, Connie	Intern'l TV Assoc	Dallas, TX	4/16-4/18/86			\$375.00		\$0.00

Lake County Area Vocational Center  
ENCUMBERED EXPENSES

Entry Date	AppNr	Participant	Study Topic	Location	Date of Study	Travel Costs	Substitute Teacher	Registration Fees	Total
1/27	81	GUIDAUSKAS, Jerry	Tech/Child Spr Conf	New Brunswick NJ	5/18-5/20/86	246.70		\$25.00	\$480.00 271.70
	81	LEAVC				155.00			\$0.00
						188.00			188.00



## APPENDIX IX

### Technology Showcase Presentation Schedule





LAKE COUNTY AREA VOCATIONAL CENTER  
EDUCATION FOR TECHNOLOGY EMPLOYMENT  
SHOWCASE PRESENTATION SCHEDULE

Tuesday, March 11, 1986

7:00 - 7:15	Health - Secondary/ Post-Secondary Articulation	VIRGINIA THOMPSON Assoc. Dean, Biological & Health Sciences College of Lake County
7:16 - 7:35	Information Processing	JAN ROBINSON Secretarial Office Occupations Instructor - LCAVC  BOB PARKER Business Data Processing Instructor - LCAVC
7:36 - 7:50	Home Economics	JOANNE FIELDING Child Care Instructor - LCAVC  SHARON PIKUL Asst. Director - Lake County Computer Technology Consortium
7:51 - 8:05	Electronics	RAY SNIDER Electronic Equipment Repair Instructor - LCAVC
8:06 - 8:25	CAD	BILL KOLTON Computer Assisted Drafting Instructor - LCAVC
8:26 - 8:45	CAM	WILL POULER - LCAVC Consultant  DON RUESCH Machine Shop Instructor - LCAVC Technology Instructor - College of Lake County
8:46 - 9:05	Principles of Technology	DICK GLOGOVSKY Assistant Director - LCAVC

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Thursday, March 13, 1986

1:30 - 1:45 pm	Health - Secondary/ Post-Secondary Articulation	VIRGINIA THOMPSON Assoc. Dean, Biological & Health Sciences College of Lake County
1:46 - 2:05	Information Processing	JAN ROBINSON Secretarial Office Occupations Instructor - LCAVC  BOB PARKER Business Data Processing Instructor - LCAVC
2:06 - 2:20	Home Economics	JOANNE FIELDING Child Care Instructor - LCAVC  SHARON PIKUL Asst. Director - Lake County Computer Technology Consortium
2:21 - 2:35	Electronics	RAY SNIDER Electronic Equipment Repair Instructor - LCAVC
2:36 - 2:55	CAD	BILL KOLTON Computer Assisted Drafting Instructor - LCAVC
2:56 - 3:15	CAM	WILL POULER - LCAVC Consultant  DON RUESCH Machine Shop Instructor - LCAVC Technology Instructor - College of Lake County
3:16 - 3:35	Principles of Technology	DICK GLOGOVSKY Assistant Director - LCAVC



## APPENDIX X

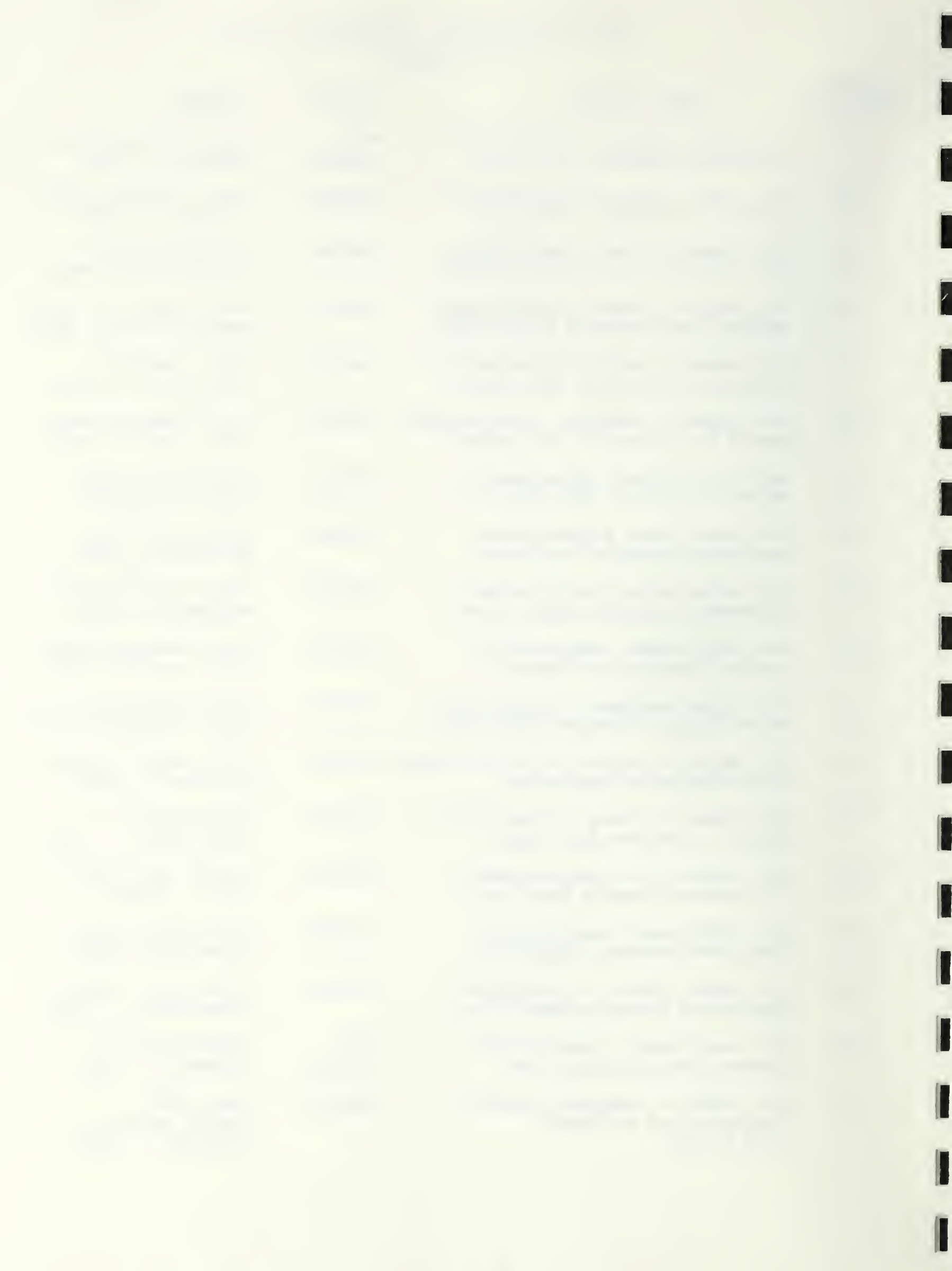
### Non-Paid Project Participants





LAKE COUNTY AREA VOCATIONAL CENTER  
BOARD OF CONTROL  
1986-87

<u>SCHOOL DISTRICT</u>	<u>NAME &amp; TITLE</u>	<u>PHONE</u>	<u>ADDRESS</u>
12	Dr. Duane Andreas, Superintendent Johnsburg Community Unit School	815/ 385-6916	2117 W. Church Street McHenry IL 60050
60	Dr. Jack P. Taylor, Superintendent Waukegan Community Unit School	336-3100	1201 N. Sheridan Road Waukegan IL 60085
95	Dr. Edward P. Cox, Superintendent Lake Zurich Community Unit School	438-2831	66 Church Street Lake Zurich IL 60047
113	Dr. James H. Warren, Superintendent Highland Park-Deerfield High Schools	432-6510	1040 W. Park Ave. West Highland Park IL 60035
115	Dr. Robert H. Metcalf, Superintendent Lake Forest Community High School	234-3600	1285 N. McKinley Lake Forest IL 60045
116	Dr. Clifton A. Houghton, Superintendent Round Lake Community Unit School	546-5522	316 S. Rosedale Court Round Lake IL 60073
117	Mr. Gary K. Allen, Superintendent Antioch Community High School	395-1421	1133 S. Main Street Antioch IL 60002
118	Dr. Darrell Dick, Superintendent Wauconda Community Unit School	526-6611	555 N. Main Street Wauconda IL 60084
120	Mr. Wayne Bottoni, Superintendent Mundelein Consolidated High School	949-2242	1350 W. Hawley Street Mundelein IL 60060
121	Dr. Larry Callan, Superintendent Warren Township High School	295-7221	300 S. Waukegan Road Lake Forest IL 60045
123	Mr. William Snodgrass, Superintendent North Chicago Community High School	578-7400	1717 - 17th Street North Chicago IL 60064
124	Dr. Donald J. Klusendorf, Superintendent Grant Community High School	587-2561	285 E. Grand Avenue Fox Lake IL 60020
125	Dr. Milton R. Herzog, Superintendent Adlai E. Stevenson High School	634-4000	Illinois Route 22 Prairie View IL 60069
126	Dr. David H. Cox, Superintendent Zion-Benton Township High School	746-1202	1606 W. 23rd Street Zion IL 60099
127	Dr. Griff Powell, Superintendent Grayslake Community High School	223-8621	400 N. Lake Street Grayslake IL 60030
128	Dr. Donald Gossett, Superintendent Libertyville Community High School	367-3159	708 W. Park Avenue Libertyville IL 60048
157	Dr. Ron Erdmann, Superintendent Richmond-Burton High School	815/ 678-7211	10006 Main Street Richmond IL 60071
---	Mr. William L. Thompson, Regional Superintendent of Schools, Lake County	689-6313	Room A904 County Building Waukegan IL 60085



EDUCATION FOR TECHNOLOGY EMPLOYMENT/EDUCATION FOR EMPLOYMENT  
ETE/EFE

Advisory Council  
1986-87

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Zoning & Env. Quality  
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Abbott Park  
North Chicago IL 60064  
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223-6601 (b) 249-0319 (H)

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395-1421

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Lake County Area Vocational Ctr.  
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223-6681

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Micrographics & CAD/CAM  
Travenol Laboratories  
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Waukegan IL 60085  
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LAKE COUNTY AREA VOCATIONAL CENTER  
GENERAL ADVISORY COUNCIL  
1986-87

Robert P. Neal, Chairperson  
ABLE ELECTRONICS, INC.  
2411 Washington St.  
Waukegan IL 60085

The following members listed also serve as  
chairpersons of the advisory committees  
for the specific programs identified:

Cliff Peacy  
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Kern Heating  
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Zion IL 60099

Warren Bross  
AUTO BODY  
E.I. DuPont DeNemours & Co., Inc.  
7828 North Merriman Avenue  
Morton Grove IL 60053

Herman Szonn  
AUTO MECHANICS  
Sessler Ford  
1010 South Milwaukee Avenue  
Libertyville IL 60048

Carol Drygas  
BUILDING TRADES  
Chicago Title & Trust  
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AAUW Nursery School  
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Libertyville High School  
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Cindy Brackey  
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Jon's Salon  
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Pauly Pontiac REPAIR  
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Jerry Kroll  
WELDING-FABRICATION  
College of Lake County  
19351 W. Washington Street  
Grayslake IL 60030





CARE AND GUIDANCE OF CHILDREN

ADVISORY COMMITTEE

1984-1985

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COMPUTER ASSISTED DRAFTING PROGRAM

ADVISORY COMMITTEE

1985 - 1986

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Sean Gegan  
6825 23rd Avenue  
Kenosha, WI 53140  
414-652-2877  
Before 1 p.m. 2nd. Shift

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Wacker Park  
North Chicago, IL 60064  
689-1111

Daum Hazners  
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CAD Section Manager  
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Abbott Laboratories  
North Chicago, IL 60064  
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ELECTRONIC EQUIPMENT REPAIR

ADVISORY COMMITTEE

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SUPERVISOR, DEPT. 736 BUILDING M4  
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937-4929

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Waukegan, IL 60087  
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Waukegan, IL 60085  
662-0322

Mr. William Peloza  
MICHAEL WILLS TV  
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Waukegan, IL 60085

Mr. Jim Seawright  
17617 Summit Drive  
Wildwood, IL 60030  
367-0860

Add: Norman Dippel  
NCR CORP.  
32951 North Rolling Road  
Wildwood, IL 60030  
223-2795

4/11/86



MACHINE SHOP

ADVISORY COMMITTEE

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Zion, IL 60099  
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Glenn Keuss  
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777-1200

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SIGNODE  
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Wilfred B. Pouler  
24101 - 118th Street  
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Marty White  
PIPER PLASTICS  
300 E. Park Street  
Mundelein, IL 60060  
949-8787



MEDICAL ASSISTING

ADVISORY COMMITTEE

1985 - 1986

Dr. Louis Lax, PhD. Chairperson  
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Waukegan, IL 60087  
843-3921 - Work  
662-5529 - Home

Dr. A. T. Sampolinski, Co-Chairperson  
2045 East Grand Avenue  
Lindenhurst, IL 60046  
356-1080 - Work

Dr. Timothy Canty, DDS, MPH  
256 Tyler Court  
Libertyville, IL 60048  
546-2900 - Work  
367-5455 - Home

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227 West Courtland  
Mundelein, IL 60060  
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Great Lake Naval Base  
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Sylvia Duncan, M.A.  
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234-3250 - Work  
623-1307 - Home

John Sturczyk, Medical Technologist  
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872-8722 Ext. 243 - Work  
872-7909 - Home

Vera Koziek, Director of Electrodiagnostic Dept.  
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578-2715

Remedios Tesch, Medical Technologist  
College of Lake County  
Medical Lab Tech. Department  
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Grayslake, IL 60030  
223-6601 - Work

Jerry Krzaczynski, DVM  
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244-1230  
Home - 4994 Grand  
Gurnee, IL 60031  
336-6078





SECRETARIAL OFFICE OCCUPATIONS

ADVISORY COMMITTEE

1984 - 1985

Ms. Nancy Brashear  
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Deerfield, IL. 60015

Ms. Denise Charts  
OMC  
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1324 North Sheridan Road  
Waukegan, IL. 60085

Ms. Betty Freehling  
Deerfield High School  
1959 North Waukegan  
Deerfield, IL. 60015

Ms. Michele Hansen  
Debbie Temps, Inc.  
Oak Mill Mall  
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Niles, IL. 60648

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Ms. Flo Ochsner  
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Mrs. Sally Preissig  
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Ms. Gabrielle Scaccia  
Victory Memorial Hospital  
1324 North Sheridan Road  
Waukegan, IL. 60085



WELDING AND FABRICATION

ADVISORY COMMITTEE

1984 - 1985

Jerry Kroll, Chairperson  
COLLEGE OF LAKE COUNTY  
19351 W. Washington St.  
Grayslake, IL 60030  
223-6601 WORK  
566-5847 HOME

Brian Duensing  
APPLICATION ENGINEERING  
801 AEC DRIVE  
Wooddale, IL 60191  
595-1060 WORK  
566-2427 HOME

Mark Godonis  
TRI-MARK WELDING  
70 Knoll Drive  
Waukegan, IL 60085  
662-4348 WORK

Richard Jacobs  
POWER CUTTING INC.  
One Energy Drive  
P.O. BOX 3000  
Lake Bluff, IL 60044  
680-8100 WORK  
295-8457

Troy Kick  
318 N. 3rd St.  
Libertyville, IL 60048  
797-6341 WORK  
362-0285 / 360-9183

Harold A. Larson  
THE PAVLIK CO.  
554 Greenbay Rd.  
Kenilworth, IL 60043  
251-5672 WORK  
566-6647

Philip Neahons  
WAUKEGAN WELDING SUPPLY  
1207 Belvidere  
Waukegan, IL 60085  
336-7191 WORK  
336-5432 HOME

Dave Orlowski  
218 W. Scranton  
Lake Bluff, IL 60044  
446-0908  
234-0603 / 433-8273

Lee Peterson  
PETERSON WELDING & FAB. CORP.  
28W040 Industrial  
Barrington, IL 60010  
381-3530

Jim Quinn  
SIX FLAGS, GREAT AMERICA  
Gurnee, IL 60031  
249-1776 Ext. 493  
244-5940 HOME

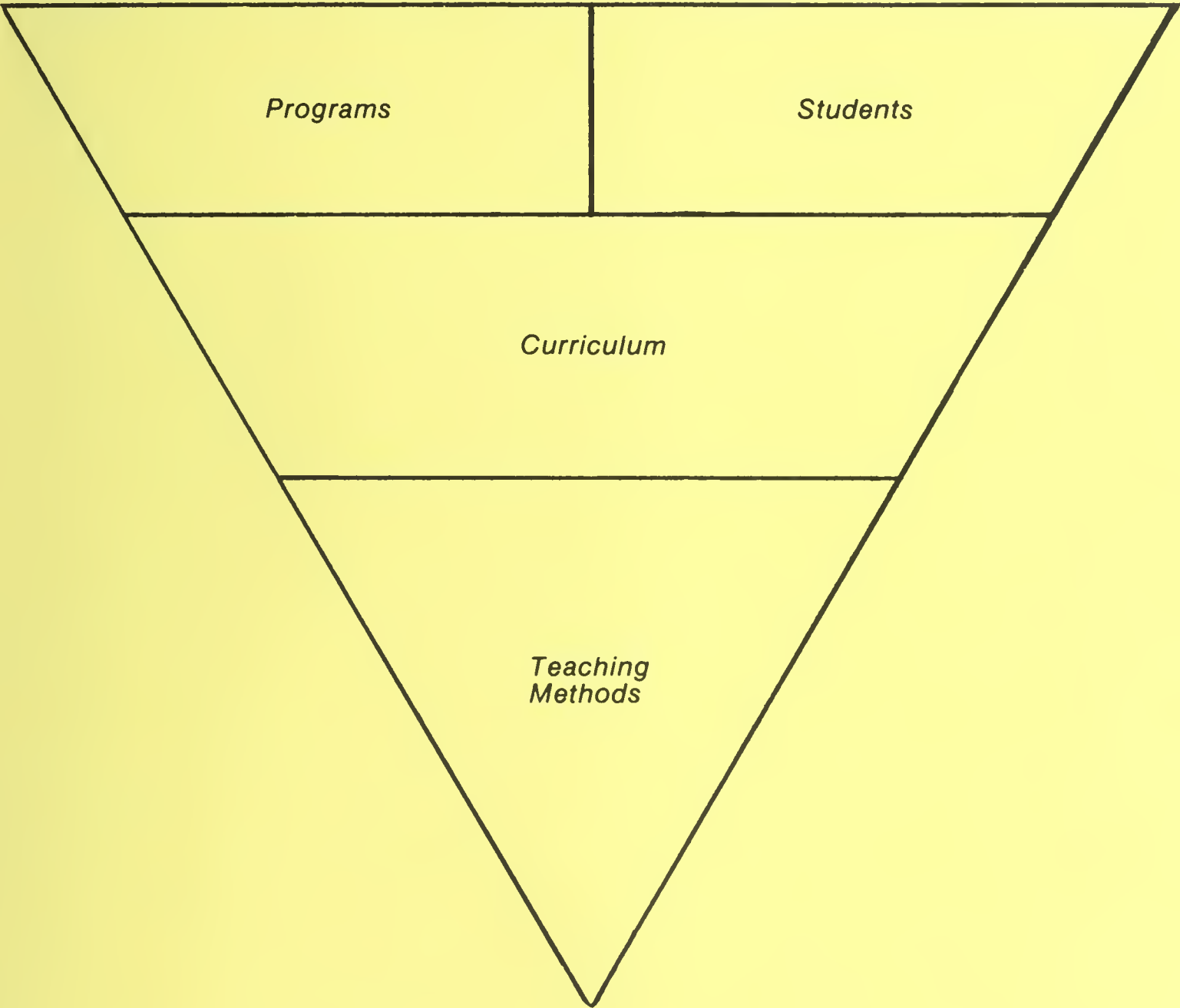
Joseph M. Stepkyk  
2419 8th Parkway  
Waukegan, IL 60085  
336-1546 WORK  
367-4434 HOME





# ARTICULATION DIRECTORY

Participating High Schools      Lake County Area Vocational Center      College of Lake County



1985 - 1986

# ARTICULATION DIRECTORY

## 1985 - 1986

PROGRAM AREAS	Lake County Area Vocational Center	College of Lake County	Alden-Hebron High School	Antioch High School	Deerfield High School	Grant High School	Grayslake High School	Highland Park High School	Johnsburg High School	Lake Forest High School
	223-6681	223-6601	815/648-2442	395-1421	945-5440	587-2561	223-8621	432-6510	815/385-9233	234-3600
Vocational Coordinator/ LCAVC Contact Person	Mike Anderson Ext. 201	Steve Springer Ext. 417	Maria Wozniak	Adrian Mueller Ext. 270	Jim Chamberlain Ext. 232	Robert Kohler	Jerry Allen	Ross Koepnick Ext. 262	S. Pollock or Jim Van Bosch	Oick Tripton
Air Cond/Htg/Refrig	Bob Marcella Ext. 253	Peter Wintersdorf Ext. 511		Roland Schleusener Ext. 286						Dennis Herrmann Ext. 37
Auto Body	Jeff Brierton Ext. 219	Jeff Brierton		Paul Juske Ext. 286				Alan Kooperman Ext. 262	Chuck Schultz	Dennis Herrmann Ext. 37
Auto Mechanics	Mike Francis Ext. 223	Terry Rawlings Ext. 508		Paul Juske Ext. 286	J. Chamberlain Ext. 232	Jerry Robinson		Alan Kooperman Ext. 262	Peter Cook	Dennis Herrmann Ext. 37
Building Trades	Joe Pregrocki Ext. 252	Doug Beitel Ext. 504		Ken Kasuboski Ext. 286	J. Chamberlain Ext. 232	James Highley	Jerry Allen	Ross Koepnick Ext. 262	Bill Dvonch	Dennis Herrmann Ext. 37
Child Care	Joanne Fielding Ext. 229	Linda Wetherbe Ext. 536		Glenda Stark Ext. 285	Donna Fitzgerald Ext. 231	Pam Renaker	Susan Boardman	Barb Enns Ext. 272	Rita Gugel	Pat Lanza
Computer Assisted Drafting (CAD)	Bill Kolton Ext. 209	James Resser Ext. 513		Roland Schleusener Ext. 286	C. Morrison Ext. 232	James Highley	Dan Stacey	Ross Koepnick Ext. 262	Bill Dvonch	Bob Pelinka
Cosmetology	Barb Rundquist Ext. 263			Adrian Mueller Ext. 270					S. Pollock or Jim Van Bosch	
Data Processing	Bob Parker Ext. 218	Dan Petrosko Ext. 565	Maria Wozniak	Doug Johnson Ext. 280	K. Cooksey Ext. 247	Sam Spasojevich	Marv Smith		Jan Bosman	George Fossell
Electronic Equipment Repair	Ray Snider Ext. 232	Jack Hudson Ext. 492		Dan Schlais Ext. 286	Ross Koepnick Ext. 232	James Highley		Ross Koepnick Ext. 262		Dennis Herrmann Ext. 37
Fluid Power		Glen Keuss Ext. 507								
Food Service	Dawn Brumm Ext. 230			Linda Zeaman Ext. 285	M. Young Ext. 231	Linda Hofeldt	Susan Boardman	Kris McKavanagh Ext. 270	Vivian Oiserio	
Graphic Communications	Paul Aken Ext. 231		Judy Marquardt	Roland Schleusener Ext. 286	Ann Slavick Ext. 230				Jeff Jerdee	
Health Care Assistant	Margaret Stanczak Ext. 224	Virginia Thompson Ext. 444		Laurie Ireland Ext. 285	D. Fahler Ext. 236				Elaine Kee	Jill Brude
Horticulture	Jeanie McKewan Ext. 228	Mark Zampardo Ext. 320		Gil Krahn Ext. 288					Bob Texidor	
Industrial Electrical Maintenance	Jim Seawright Ext. 255	Jack Hudson Ext. 492		Dan Schlais Ext. 286		James Highley	Jerry Allen	Ross Koepnick Ext. 262	Bill Dvonch	Dennis Herrmann Ext. 37
Mach. Shop	Don Ruesch Ext. 250	Jerry Digilio Ext. 506		Greg Collins Ext. 286	J. Chamberlain Ext. 232	Dave Kapraun	Jerry Allen			
Media Specialist	Marty Hollander Ext. 247		Judy Marquardt	Tom Herziger Ext. 260	L. Adler Ext. 226	William Renaker	Marv Smith	Steve Alsberg Ext. 276		Dave Miller Ext. 37
Medical Assisting	Rose Meyer Ext. 217	Virginia Thompson Ext. 444		Laurie Ireland Ext. 285					Elaine Kee	
Secretarial Office Occupations	Jan Robinson Ext. 236	Donald Holland Ext. 514	Maria Wozniak	Doug Johnson Ext. 280	B. Freehling Ext. 260	Sandra Hull	Suzanne Sears	Mary Jo Lynch Ext. 295	Jan Bosman	Char Ash
Small Engine/ Recreational Vehicle	Paul Baumink Ext. 248			Paul Juske Ext. 286	J. Chamberlain Ext. 232	Jerry Robinson	Dave Sears	Alan Kooperman Ext. 262	Peter Cook	Dennis Herrmann Ext. 37
Welding - Fabrication	Gary Herriman Ext. 222	Jerry Kroll Ext. 512		Greg Collins Ext. 286	J. Chamberlain Ext. 232	Dave Kapraun	Jerry Allen		Bill Dvonch	

The Lake County Area Vocational Center has formulated this Articulation Directory to identify key people in the various feeder high schools who are engaged in similar subjects or areas of teaching. Exchange of ideas and curriculum coordination are unlikely to occur unless some medium for communication is developed. It is hoped that this directory will spark communications on the subject of improved articulation between the schools listed below.

Ge Zurich High School	Libertyville High School	Mundelein High School	North Chicago High School	Richmond- Burton High School	Round Lake High School	Adlai E. Stevenson High School	Warren Township High School	Wauconda High School	Waukegan East High School	Waukegan West High School	Zion-Benton High School
3-5155	367-3100	949-2200	578-7400	815/678-4525	546-2128	634-4000	295-7221	526-6611	336-3100	336-3100	746-1202
	Gary Hodgson Eugene Brakel	Jane Falls Ext. 2208	Georgia Van Cleave 578-7411	Linda Oavidson	Ila Bauer/ Ardis Harnagel	Richard Vogtsberger Ext. 216	Oorothy Michno Ext. 86	Fred Loffredo	Arnold Berendsen	Walter Rucks Ext. 612	Or. Jerome Budzik Ext. 214
	Julian Emanuelson 367-3144										
	Julian Emanuelson 367-3144	Jim Jackson Ext. 2221	Ted Hudson Ext. 27		Bruce Britton	Robert Hoffman Ext. 206		Oave Falk			John Davis
	Charles Kranz 367-3144	Jim Jackson Ext. 2221	Ted Hudson Ext. 27		Bruce Britton	Robert Hoffman Ext. 206		Oave Falk	Myron Eyestone Ext. 560	Oarrel Schattl Ext. 660	John Oavis Ext. 40
	Chuck Swanson 367-3144	Jim Jackson Ext. 2221	Jorge Colon 578-7437	Dennis Boisen	Ron Ziemann	Richard Johannsen Ext. 212	Matt Vanlerberghe Ext. 50	Tim Rennels	Bob Colpetzer Ext. 560	Jerry Michalski Ext. 660	Jim O'Toole Ext. 357
	Ellen Whitmore 367-3171	Paula Mayfield Ext. 2201	Sylvia Hu 578-7441		Jean Woods	Susan Petschow Ext. 286	O. Gilmore Mary Oietz Ext. 68	Judy Poyser	Connie Sheffield Ext. 544	Joanne Warner Ext. 544	Florence Carlson Ext. 366
	Oon Totter 367-3111		Jim Gugel 578-7437		Jack Woods	Richard Johannsen Ext. 212		Jim Lepage	Glen Oolmar Ext. 560	Allan Hovey Ext. 660	Gary Slocum
		Jane Falls Ext. 2208	Georgia Van Cleave 578-7411							Louis Marello Ext. 566	Or. Jerome Budzik Ext. 214
	Gary Hodgson	Jeri Phillips Ext. 2206	Jim Weber 578-7420	Oave Usrey & Linda Oavidson	Ila Bauer	Sam Ritchie Ext. 217	E. Keefauver R. Richey Ext. 71	Oan Thornton Lana Metropulos	Jeff Allen Ext. 545	Terry Thompson Ext. 645	Joe Hutten Ext. 365
	Myron Konkle 367-3144		Ted Hudson 578-7437					Oave Falk	Myron Eyestone Ext. 560		
						Robert Hoffman Ext. 206	Kurt Bristol Ext. 50				
	Ellen Whitmore 367-3171	Paula Mayfield Ext. 2201	Sylvia Hu 578-7441	Jan Ziemann	Karen Pierce	Peggy Bromley Ext. 203	Fran Maurath Ext. 68	Judy Poyser	Connie Sheffield Ext. 544	Connie Sheffield Ext. 544	Jan Ahern Ext. 42
	Chuck Swanson 367-3144				Randy Hoff	Bill Kirchherr Ext. 212	Richard Flaker Ext. 50		Al Trafford Ext. 564	Ron Sanderlin Ext. 660	Dick Meyer Ext. 360
	Andy Bitta	Kathie Carr Ext. 2214	Georgia Van Cleave 578-7411		Julie Barnicle	Ken Johnson Ext. 210		Margaret Fosse	Louis Marello Ext. 566	Louis Marello Ext. 566	
	Donald Lauer		Georgia Van Cleave 578-7411				Ralph Harvey Ext. 66				
	Myron Konkle 367-3144	Jim Jackson Ext. 2221	Ted Hudson 578-7437					Oave Falk	Myron Eyestone Ext. 560	Oarrel Schattl Ext. 660	
	Julian Emanuelson 367-3144	Jim Jackson Ext. 2221	Ed Skinner 578-7437	Dennis Boisen	Hooshang Ameri			Tim Rennels	Ron Oahlman Ext. 560	Ron Sanderlin Ext. 660	Mike McGue Ext. 223
	Oon Totter 367-3111		Ouane Kovacek		Fran Dmytro	Pat O'Donnell Ext. 250	Fred Kattner Ext. 27		Jody Stewart Ext. 559		Karen Grooves Ext. 225
	Anne Boone		Georgia Van Cleave 578-7411		Julie Barnicle				Louis Marello Ext. 566		Oavid Mayhak Ext. 325
	Kathy Thompson 367-3172	Judy Stangel Ext. 2206	Jim Weber 578-7420	Linda Davidson & Oave Usrey	Ila Bauer	Joan Haufschild Ext. 262	Sue Walker Ext. 63	Lana Metropulos	Jeff Allen Ext. 545	Flo Spero Ext. 645	Mary Kling Ext. 365
	Harry Carlson 367-3144	Jim Jackson Ext. 2221	Ted Hudson 578-7437			Robert Hoffman Ext. 206		Dave Falk	Myron Eyestone Ext. 560	Oarrel Schattl Ext. 660	Lou Massoug Ext. 223
	Julian Emanuelson 367-3144	Jim Jackson Ext. 2221	Ed Skinner 578-7437	Dennis Boisen	Hooshang Ameri			Oave Falk	Ron Oahlman Ext. 560	Ron Sanderlin Ext. 660	Mike McGue Ext. 223



## APPENDIX XI

Individualized Career Plan Workshop Flyer







## INDIVIDUALIZED CAREER PLAN (ICP) WORKSHOP

Co-Sponsored By: Lake County Area Vocational Center  
and  
Lake County Career Guidance Consortium

An ICP is a dynamic record/format that summarizes an individual's past experiences, is a comprehensive outline for suggested future activities, and ideally, is a mechanism for analyzing both to assist the individual in making career/life choices.

### WHY ATTEND?

Your attendance at this workshop will ensure a better understanding of the ICP and its potential benefits to you and the students you serve.

A computerized ICP developed for use by secondary school-age students has been developed by Mr. Mike Shane from Genoa-Kingston High School. This ICP utilizes the Apple II computer and allows for some individuality and common components needed by many of the participating districts. The workshop will also give you the opportunity to evaluate the ICP program for possible use in your school district.

### WHO SHOULD ATTEND?

Elementary and high school staff:

Counselors, career education teachers, vocational directors, administrators

### WORKSHOP FORMAT

There will be an audio visual presentation followed by a question and answer period covering the utilization of a computerized ICP within each district.

### AGENDA

2:00 - 2:15 p.m.	Registration and refreshments
2:15 - 3:30 p.m.	ICP Presentation
	Mike Shane, Genoa-Kingston High School

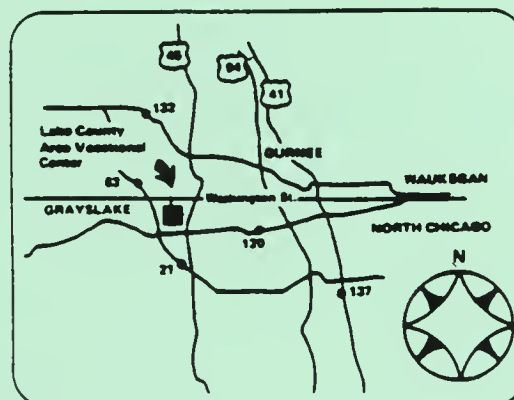
### ICP WORKSHOP

Tuesday, April 29, 1986  
2:00 - 3:30 p.m.

Rooms 129-130  
Lake County Area Vocational Center  
19525 West Washington Street  
Grayslake IL 60030

Why ICP's? How to use ICP's? How costly?  
How to initiate? How much time?  
How to use a needs assessment?

Sample materials & manuals  
Computer software program  
Locally designed & managed programs



### REGISTRATION FORM

ICP WORKSHOP: Tuesday, April 29, 1986

Name \_\_\_\_\_ Position \_\_\_\_\_

School/Company/Agency \_\_\_\_\_

Address \_\_\_\_\_ ( ) \_\_\_\_\_

City/State/Zip \_\_\_\_\_ phone \_\_\_\_\_

Return by April 28, 1986 to: Dick Glogovsky, Lake County Area Vocational Center  
19525 W. Washington St., Grayslake IL 60030  
312/223-6681



## APPENDIX XII

Electronics Workshops Flyer





**WHAT:** The Electronics Industry Association, the Illinois State Board of Education, Lake County Area Vocational Center, and Quincy Area Vocational Center are sponsoring two work-shops for electricity/electronics instructors. These work-shops are designed to provide teachers with practical "hands-on" experience in the areas of Video Cassette Recorder Maintenance/Repair and Digital/Microprocessor Application.

**VIDEO CASSETTE RECORDER MAINTENANCE/REPAIR OVERVIEW:** The newest VHS and BETA Video Cassette Recorders will be used in this work-shop along with the latest test equipment to diagnose, service, and maintain electronic and mechanical components.

**DIGITAL/MICROPROCESSOR APPLICATIONS OVERVIEW:** This work-shop will start with logic and progress through conversion, circuit applications, counters, phase lock loops, and dedicated microprocessors.

**WHERE:**

Lake County Area Vocational Center  
19525 West Washington Street  
Room: 169  
Grayslake, IL 60030  
Telephone: (312) 223-6681  
Contact: Dick Glogovsky

**WORK-SHOP TOPIC:**

Video Cassette Recorder  
Maintenance/Repair

Instructor: Mr. Charly Howard  
Quasar Training Manager (MESCO)

**WHEN:**

July 8-12, 1985  
(8:30 a.m. - 5:00 p.m.)

Quincy Area Vocational Center  
219 Baldwin Drive  
Room: G102  
Quincy, IL 62301  
Telephone: (217) 224-3770  
Contact: Gene Willimann

Digital/Microprocessor  
Applications

Instructor: Dr. Elmer Poe  
Professor, Eastern Kentucky University

July 15-19, 1985  
(8:30 a.m. - 5:00 p.m.)

**Enrollment is limited - - register today!!!**

**REGISTRATION FORM**

Name \_\_\_\_\_  
School \_\_\_\_\_  
Address \_\_\_\_\_  
(City) (State) (Zip)

Home Address \_\_\_\_\_  
(City) (State) (Zip)

School Phone \_\_\_\_\_  
(Area Code)

Home Phone \_\_\_\_\_  
(Area Code)

Please check the session you plan to attend:

\_\_\_\_\_ Lake County AVC  
(Video Cassette Recorder Maintenance/  
Repair) July 8-12

\_\_\_\_\_ Quincy AVC  
(Digital/Microprocessor Applications)  
July 15-19

**FEES:** Registration fees will vary depending on the college or university in which you enroll.

Please complete this registration form and return on or before May 31, 1985 to:  
Richard Glogovsky, Lake County Area Vocational Center, 19525 West Washington  
Street, Grayslake, IL 60030

(over please)

## REGISTRATION INFORMATION

Upon receipt of your registration, you will be mailed a packet of materials containing information on what to bring, lodging, restaurants, etc. In addition, the packet will include a list of colleges and universities offering credit for the workshops as well as the fee schedule. At that time you will be advised of the cost of your registration and to whom it should be sent.

We look forward to having you participate in these work-shop activities. Your involvement in the work-shops will help to enhance your skills so that you can provide your students with current information on Video Cassette Recorder Maintenance/Repair and Digital/Microprocessor Applications.



## ELECTRONICS WORKSHOPS

Sponsored By:

Electronics Industry Association  
Illinois State Board of Education  
Lake County Area Vocational Center  
Quincy Area Vocational Center.

Richard Glogovsky  
Lake County Area Vocational Center  
9525 West Washington Street  
Grayslake, IL 60030

Typeset and Printed at the Quincy Area Vocational Technical Center - by David L. Jaynes.

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APPENDIX XIII

LCAVC Multi-Color Brochure





COME TO

# LCAC

AND



## COLOR YOUR FUTURE BRIGHT



### PROGRAM AREAS

Business Marketing & Management

Home Economics Occupations

Health Occupations

Applied Biological & Agricultural

Industrial Oriented Occupations



## APPLIED BIOLOGICAL & AGRICULTURAL



**ORNAMENTAL HORTICULTURE.** Science and creativity meet in this program where students get "hands-on" experience that prepares them for the large and expanding field of horticulture. Students gain skills through daily use of horticultural products, equipment and facilities that are currently used in the industry. Areas of interest include plant propagation and forcing; fresh, dried and silk flower arranging; landscape design, installation and maintenance, plant identification; fruit and vegetable production, turf and pest management, business operations and customer relations, interior plantscaping and horticultural mechanics.

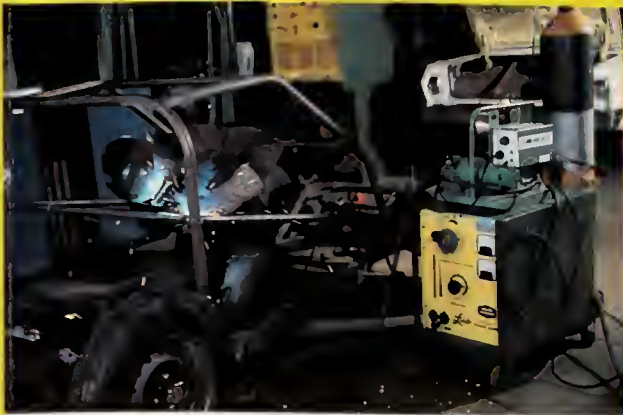


**BUILDING TRADES.** This program is designed as a two-year curriculum which includes the construction of a residential home. This "project home" is financed by the Center, built by students under the supervision of instructors, and sold to the general public. During the construction of the residence, students learn and demonstrate activities necessary to build homes as they gain job related entry level skills. Areas of construction taught in the program include: carpentry, plumbing, masonry, roofing, drywall, concrete and various related trades required to complete the "total" project. Pictured are students involved in siding a project house.



**PRINCIPLES OF TECHNOLOGY** is a science program for 10th and 11th grade students interested in pursuing technical careers and extending their understanding of the physical principles underlying modern technology. Seven basic principles (Force, Work, Rate, Resistance, Energy, Power and Force Transformers) will be studied in detail through hands-on activities, demonstrations, lab experiments and video presentations. Test equipment and technical devices used in lab experiments will help the students understand physical principles and their application to mechanical, fluid, electrical and thermal systems. Mathematics needed to understand and apply technology concepts will be covered. Program completers will earn science credit.

**GRAPHIC COMMUNICATIONS** is a two-year program in which students gain "hands-on" experience in many areas: layout and design, typesetting which includes telecommunications, paste-up and keylining, camera and darkroom operations; stripping and platemaking; offset presswork, bindery and finishing. Students completing this program will acquire general knowledge of the printing industry and at least one specialized skill so as to be employable in an entry level position. Job opportunities in the Chicago-Milwaukee area are considered to be excellent.



**WELDING-FABRICATION.** The welding process continues to be utilized by many large manufacturers of metal products. The Center's welding program offers students knowledge and skill in a variety of subjects including oxy-acetylene welding, brazing and automatic cutting, stick arc, Tig & Mig, layout and fabrication. Students work with different kinds of materials including carbon, stainless steel and aluminum in the flat, horizontal, vertical and overhead positions. Simulated welding skill tests utilizing non-destructive and destructive test procedures are taken by students. Blueprint reading, layout and fabrication methods are studied and a variety of projects are constructed using the welding skills acquired in the program.



**COMPUTER ASSISTED DRAFTING.** Interested in a high tech position of the future in drafting or engineering? If so, you should consider this new CAD program. The course outline includes: 1) introduction to CAD, 2) two-dimensional CAD; 3) three-dimensional CAD; 4) project drawing work of the students choice such as mechanical or architectural. Drafting prerequisites for the CAD program are two semesters for drafting majors, and one semester for math/science pre-engineering majors. Computer assisted drafting uses a station where the student learns how to operate a stylus and digitizer tablet (menu of commands) to create a drawing in less time than by conventional means. Instruction is given through "hands-on" tasks with individual assistance from the instructor.



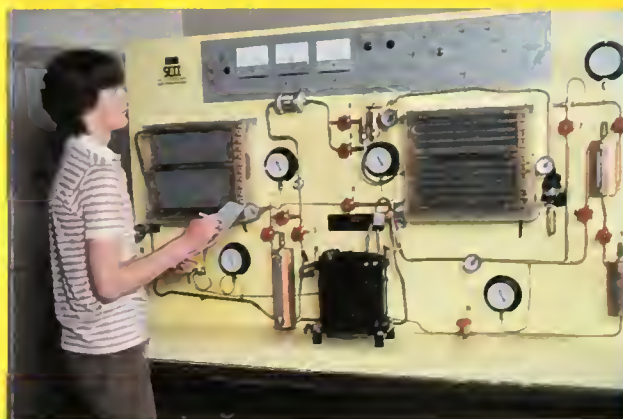
**MACHINE SHOP.** Machine tool metalworking has become automated and quite sophisticated in the last decade. Metalworking equipment operation is now being programmed and controlled by computers. In the Center's Machine Shop program, students acquire skills in operating an engine lathe, vertical and horizontal milling machine, sensitive and radial drill press, surface, pedestal and cylindrical grinders, tool grinder, as well as the electrical discharge machine. Advanced students are given an opportunity to gain basic programming skills on a CNC lathe and milling machine. Programs are then run on miniature and full-size computer numerical control equipment. Instruction in this program prepares students for employment as machinists or even CNC programmer/operators.



**COSMETOLOGY.** In offering beauty services to their customers, Cosmetologists shape and style the hair, give permanent waves, straighten hair, give hair and scalp treatments, and color hair. Other cosmetology skills presented include: skin care, manicures, make-up applications and eyebrow shaping. This program is offered in the morning or afternoon and usually takes the junior year, summer months, senior year and a minimum of one Saturday per month during the two years of training. The job prospects are good: increased population, higher incomes and working women are creating great demand for Cosmetologists. Hair styling for men is also adding to this demand.



**INDUSTRIAL ELECTRICAL MAINTENANCE.** This program, with its expanded coverage of pneumatics and robotics, offers an excellent beginning point for students to acquire the skills needed for entry into high technology maintenance. Initially, students learn to distribute power by conduit and cable runs in the lab and in the Center's Building Trades project home. Students also study motors controlled by magnetic logic, digital logic and microprocessor programs. Pneumatic devices and program microprocessors are set up to perform a series of timed operations in simulated production sequences. Job opportunities are excellent in this growth industry.



**AIR CONDITIONING/HEATING/REFRIGERATION.** Trained repair persons are in demand to keep air conditioning heating refrigeration units operating. Students enrolled in this program learn to install, service and repair residential units. Students learn basic theory, heating principles, blueprint reading, piping, sheet metal fabrication, soldering, use of service tools, and control analysis. Training becomes interesting through "hands-on" activities as students set up, operate and test various types of heating, cooling, and refrigeration equipment.



**AUTO MECHANICS.** This program provides the necessary technical information and experience for individual skill development in three major areas: 1) engine diagnosis/tune-up; 2) brakes and suspension; and 3) engine disassembly and overhaul. A unit on auto computer operation and testing is included in the tune-up section of the curriculum. Students enrolled in the program are required to spend one semester in each of the three areas and select one area of specialization for their last semester at the Center. Automotive manipulative activities related to disassembling, assembling, adjusting, repairing and servicing the vehicle are practiced by students.



**SMALL ENGINE AND RECREATIONAL VEHICLE REPAIR.** This program provides instruction on the repair of motorcycles, snowmobiles, outboard marine and air cooled lawn and garden equipment. All instruction is directed toward having the student become skillful in the use of factory service manuals. Students not only learn factory repair procedures pertaining to the product line they are interested in, but they also learn repair shop organization, equipment handling, testing procedures, inventory control and customer relations.

**AUTO BODY** teaches students the fundamentals of auto collision repair and refinishing, and includes instruction on damage repair, welding, surface preparation and painting. In addition to regular classroom, demonstration and "hands-on" activities, the auto body class takes field trips, visits trade shows and has frequent guest speakers. The career opportunities for LCAVC Auto Body program graduates are excellent, with instructors directly involved in placement. In addition to trade skills, the LCAVC Auto body program teaches leadership, pride and craftsmanship. LCAVC Auto Body is a busy and exciting place to be if you like to renew damaged auto body units.





LCAVC PROGRAM AREAS

BUSINESS MARKETING & MANAGEMENT



**BUSINESS DATA PROCESSING.** The Data Processing program prepares students for entry level positions in the profession of business data processing. Through the use of "hands-on" individualized instruction, students prepare for three entry level areas: 1) computer programming -- using IBM OS/COBOL, 2) computer operations -- using Datapoint minicomputers with telecommunications, 3) data entry -- using on-line and key-to-disk equipment. Upon successful completion of the program, students have the opportunity to earn college credit, as well as to participate in an off-campus work experience in a local industry.



**SECRETARIAL OFFICE OCCUPATIONS.** The fact that more than 8500 new secretaries are needed each year in Illinois means that secretarial employment opportunities are excellent. In addition to acquiring specific secretarial skills, students receive training on information processing equipment with software programs such as word processing, multiplan, database, and graphics. Students leaving the Secretarial Office Occupations program at LCAVC can find employment as word processing specialists, data systems clerks, administrative assistants, legal secretaries, secretaries, medical transcriptionists, medical records secretaries, receptionists, typists and other related areas. Students are pictured at work on the Wang OIS/60 Information Processing System.

HOME ECONOMICS OCCUPATIONS



**COMMERCIAL FOOD SERVICE.** Students are given the opportunity to rotate through various food preparation areas and are allowed to specialize after basic proficiencies are gained. Areas of training include food service operation, basic food preparation, science and math concepts related to food preparation, quantity food production, sales service, equipment and maintenance, health and safety, sanitation, nutrition, management and inventory control. Actual experience in quantity and fast food preparation is given through the use of the Center's snack bar and dining room.



**CARE & GUIDANCE OF CHILDREN.** The LCAVC Child Development Center provides a laboratory experience where students "learn by doing" by working with young children. Students gain skills and knowledge in areas related to: guiding the behavior of children, observing and recording behavior, understanding child growth and development, learning preschool operations, and carrying out various activities with children in the preschool. Students have the opportunity to participate in an extended campus training experience during their fourth semester. Graduates are qualified to serve as assistants to teachers in nursery schools, day care centers, kindergartens, and various agencies for exceptional children.

HEALTH OCCUPATIONS



**MEDICAL ASSISTING.** Students obtain basic patient skills and knowledge in one or more of the following areas of specialization: 1) Medical Assistant, students perform clinical and lab tasks involved in the care of individuals receiving physicians' services; 2) Lab Assistant, training enables students to execute routine lab procedures; 3) Electrocardiograph Technician, students learn to perform heartbeat tracings with the electrocardiograph, Holter Monitor and other high technology equipment; 4) Medical Secretary-Receptionist, medical office procedures are developed through coordinated efforts in the Secretarial Office Occupations program. A variety of clinical sites (extended campus) allow students to apply skills in real work situations.



**HEALTH CARE ASSISTANT.** is a multi-faceted program at LCAVC. During two years of study, students acquire state certification as a nursing assistant and are able to explore numerous other health subjects including child care, respiratory, physical and occupational therapy, EMT, medical lab, home health care, x-ray and others. "Hands-on" learning is emphasized in the lab which simulates a hospital setting. Extended campus or internship learning activities are included in all areas. State regulations now require nursing home and home health care workers to be certified and the employment outlook for certified workers is excellent. This program also provides a strong base for those students who go on to higher education in the health care field.

The Lake County Area Vocational Center affirms and adheres to a policy that all vocational opportunities will be offered without regard to race, color, national origin, sex or handicap.

PROGRAM AREAS  
 Business Marketing & Management  
 Home Economics Occupations  
 Health Occupations  
 Applied Biological & Agricultural  
 Industrial Oriented Occupations



COLOR YOUR  
 FUTURE BRIGHT



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Lake County Area Vocational Center, 19525 West Washington Street, Grayslake, Illinois 60030



PARTICIPATING HIGH SCHOOLS

Antioch • Deerfield • Grant • Grayslake • Highland Park • Johnsburg • Lake Forest • Lake Zurich • Libertyville  
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Lake County Area Vocational Center is an extension of its member districts' curriculum. The facility presently serves juniors and seniors from cooperating high school districts in Lake and McHenry counties. Program curriculum is designed to meet current job market needs and is revised annually to keep training skills up-to-date. LCAVC is able to provide labs and real world settings for a learning environment that students find challenging and enjoyable. Latest training equipment is used to teach new technology concepts practiced in business and industry. Emphasis is placed on student participation in actual or simulated job and production situations. An individualized approach to training allows students to advance at their own pace and acquire knowledge of skills necessary for employment or advanced training. These committees review the curriculum, suggest appropriate instructional equipment and give service to program instructors and Center administrators.

You are invited to visit LCAVC, meet the instructors, tour the facilities and observe the programs in operation. For more information, see your high school counselor or call (312) 223-6681





Lake County Area Vocational Center, 19525 West Washington Street, Grayslake, Illinois 60030

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## APPENDIX XIV

### Centergram





# CENTERGRAM

November, 1985 Vol. IX No. 1



## LCAVC Teachers Learn New Technology Applications

ABBOTT PARK, Ill., September 3, 1985 -- Ray Snider (center) and Will Poulter (right), instructors at the Lake County Area Vocational Center (LCAVC) in Grayslake, participated in a week-long training program at Abbott Laboratories in August. Here, Dave Kent, manager of Abbott's corporate equipment development shop, explains the function of a computer controlled milling machine. Snider, a resident of Lindenhurst, and Poulter a resident of Trevor, Wisc., were among five vocational teachers who observed practical applications of shop technology at Abbott through a program coordinated by the Lake County Area Vocational Center and Northern Illinois University.

The teachers spent time in Abbott's tablet manufacturing operation, maintenance and metrology shops, and controls and instrumentation areas. The program was designed to show the teachers current applications of the technology they teach. This enables them to advise their students about skills they will need when seeking jobs in industry. LCAVC was able to provide this training for its instructors from funding received through a Education for Technology Employment Grant from the Department of Adult Vocational Technical Education of the Illinois State Board of Education in Springfield.

## REGIONAL DELIVERY SYSTEMS COME TO ILLINOIS, LAKE COUNTY

Now that most of you have become familiar with the concept of Area Vocational Centers and their role and function, we're going to spring a new term on you -- "Regional Delivery Systems for Vocational Education."

However, don't become too concerned over the term Regional Delivery System, hereafter referred to as RDS. The role and function of an AVC and a RDS are not too different. Both systems have as their overriding priorities the efficient delivery of vocational education programs to all students, including adults, in a given geographic region.

Back in the middle 1960's, our State Department of Education promoted the development of AVC's throughout the state. Financial incentives in the form of funding for new buildings and instructional equipment were made available to two or more districts that were willing to develop an Area Vocational Center. The development of AVC's proceeded until the mid 1970's, with the last two becoming operational in 1977.

There are currently 32 AVC's operating throughout the State of Illinois providing quality vocational education to thousands of students. However, the AVC concept has fallen short of its mark in Illinois. Currently, only 50% of the geographic area of Illinois is served by AVC's. Declining enrollment in the mid 1970's and dwindling state and local financial resources have hampered the development of a comprehensive system of AVC's statewide.

In July of 1982, the State Board of Education, realizing the shortcomings of the AVC delivery system, directed the State Superintendent to conduct a comprehensive policy study of education for employment. Since, many representatives of employment sectors and educators have been involved in various ways. The first major document

(Cont. on Page 5)



# C.A.D. AT L.C.A.V.C.

PHOTOS BY Ken Coomans-Warren



Marilyn Minchello of Warren High School puts the finishing touches on her drawing.



After reestablishing conventional drafting skills, students move to the computers.



Double-imaging allows students to see the commands they have entered and the drawing itself.



Students are all business in Bill Kolton's C.A.D. class

$$\begin{array}{r} \text{L.C.A.V.C.} + \text{C.L.C.} \\ = \\ 3 \text{ YRS. C.A.D.} \end{array}$$

Computer Assisted Drafting is alive and well at the Lake County Area Vocational Center (LCAVC) and the College of Lake County (CLC). Bill Kolton, LCAVC Instructor, has all new hardware and software in his classroom this year. The newer more powerful systems are just what is needed to give local high school students that middle step between local high school drafting classes and the CLC CAD classes. "I'm really happy with the new equipment this year, and the students are eager to learn everything we have to offer," said Kolton. "Lake County students are very fortunate to have the truly advanced state of the art equipment at the LCAVC and CLC facilities. If a student starts with the LCAVC CAD program, he can get a full three years of training in CAD without leaving our two campuses."

LCAVC and CLC have joined together to provide space at the Vocational Center not only the LCAVC program, but also the College program. The former LCAVC Diesel lab, (just across the hall from the LCAVC CAD classroom), was converted into office space, CLC CAD classroom and the new automated Industrial Center (AIC). When completed later this fall, the AIC will have computer driven mills, lathes and, of course, robots to tend the machines.

## PARENT CONCERN SHOWS IN GRADES

Parents who monitor homework, talk with their children, and take part in school activities help their children get higher grades in school, research shows. The National Center for Education Statistics found that the following factors seemed to contribute to students doing well in school:

Parents almost always know child's whereabouts. Child talks with mother or father almost every day. Parents attend school meetings at least once in awhile. Mother and father keep close track of how well child does in school.









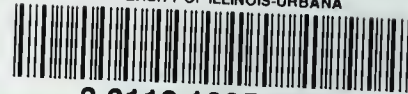
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